-																			
							St	ate of Lo	uisian	1a							Date of	submitt	al
						Emissions	Inventory Q	uestionn	aire (I	EIQ) for Air	Pollutants						Nov	20	013
																		20	,13
E		oint ID N	0.	9	Descriptive	Name of the	Emissions Source	(Alt. Name))		Ap	proximate Locati	on of Stack or V	ent (see i	instruc	tions)			
		nation)																	72
	1700	0-80.1				Refined A	CR Storage Tank			Method	15	06,"Address Mate	The second secon				Datum		
Tem	no Subie	ct Item II	No							UTM Zone Latitude	30 6	Horizontal	739000	mE 15		tical .	3327		mN
	po Buoje	ct Item II	7110.							Longitude	-90 °	31	1	15		1			redths
		0199						T.		Longitude	-90			13				nund	redths
	and Dis		Dian	neter (ft)	or Stack	Height of S			Stack	Gas Flow at	Stack Gas Exit	Normal Opera	ting	Date of		P	ercent o	f Annu	al
A CONTRACTOR OF THE PARTY OF TH	al Charac age? (yes	- Secretaria de la configuração de la confidência de la configuração de la configuração de la configuração d	Disc	charge A	rea (ft²)	Above Grad	le (ft) Veloc	ity		tions, <u>not</u> at	Temperature	Time		struction			ghput '		
Cirai	ige: (yes	or no)							Standa	ard (ft ³ /min)	(°F)	(hours per ye	ar) Mo	odification	n		Emissio	n Poin	t
	no	- 1	,	AT A		110							Mar		1971	Jan-	1000	Jul-Sep	
//			_1	NA	ft	NS	ft NA	ft/sec	NA	ft^3/min	23 °F	*	hr/yr			Mar	Jun .		Dec
					ft ²											25%	25%	25%	25%
	1	Tv	no of F		and Heat I		4 4:>					0 4 15			$\overline{\Box}$				
Fuel	-	I y		e of Fuel	and Heat I		nput (MMBTU/hr		-			Operating Par	The second secon	THE RESERVE AND PERSONS ASSESSMENT OF THE PE	s)			-	200
A GCI	2		THE RESERVE THE PERSON NAMED IN	NA		Heat I	NA	-)	N	I1 Oti	Rate/Throughput		Paramet			D	escripti	on	
	b			11/1			IVA						3 MM lb	/уг					
	c										ng Rate/Throughp		NA 50,000						
	1				Notes				_	hell Height (ft)	olume/Cylinder D	rispiacement	50,000 g	al					
		Emissio	ns from th	his source	are routed to	emission point	1700-80			ank Diameter (ft			34						
		21110010		mo source	are realed to t	emission point	1700-00		_	ank Diameter (it	Fixed Roof	Floating Ro	16	Exter				T-4	1
									-	Date Engine Orde		Floating Roo	of 🛚					inte	ernal
								1 -	-		Built by Manufact	urar	·	Engine N	lodel 1	rear			
										I Engines:	Rich Bu	the second secon	Lean Burn		2 Stro	ko		4 Strol	
Em	ission Poi	int ID No.	(Designa	tion)	Control	Control	HAP/TAP			A Engines.		Permitted	Cean Burn	<u> </u>	2 340	Re		4 5110	Ke
			(20 co.B.		Equipment	Equipment	CAS Number					Emission Rate	Add,						
		1700-80.	1		Code	Efficiency		100	Propo	osed Emission R	ates	(Current)	Change,	Contin	A10200000000000000000000000000000000000	Con	centrat	on in (Jases
											80		Delete, or	Compli	The state of the s	65 50	Exiting		
Polluta	nt					*		Averag		Maximum (lbs/hr)	Annual	Annual	Unchanged	Meth	lod		G		80)
Particu	late matte	r (PM.o)						(lb/hr)	(IDS/III)	(tons/yr)	(tons/yr)							1
Sulfur	-	- (10)		Ж	-											-		the same of the last of the la	by vol
	n oxides				1				_								-	-	by vol
-	monoxid	e											-	-				-	by vol
Total V	OC (inclu	uding those	e listed be	low)	000	0%		3/1		0.03	*	*	C						by vol
Lead					т.												-	or other Desirement of the last of the las	by vol
																		Name and Address of the Owner, where	by vol .
																			by vol
				U and the second															by vol

							State of	Louisi	ana	11						Date of	submit	tal
		16 282	li .		Emission	s Inventory	Questio	nnaire	(EIQ) for Ai	r Pollutants						Nov	2	013
E		Point ID [gnation)	No.	Descriptiv	e Name of the	Emissions Sou	rce (Alt. Na	me)		Ap	oproximate Locat	ion of Stack or	Vent (see	instruc	tions)			
		0-80.2			Chlorinated	ACR Storage T	ank		Method UTM Zon	e 15	06,"Address Mai	ching-Primary N 739000	Name"	Va	tical	Datum	_	
Tem		ect Item I	D No.						Latitude Longitude	30 °		L		5 "	ucai .	332	hund	mN fredths dredths
	and Dis		Diamet	er (ft) or Stack	Height of S	tack Stack	Gas Exit	Stac	k Gas Flow at	Stack Gas Exit	Normal Opera	ating	Date of		P	ercent (
	al Chara age? (yes	cteristics or no)	Discha	arge Area (ft²)	Above Grad	le (ft) Ve	elocity	Con	ditions, <u>not</u> at dard (ft³/min)	Temperature (°F)	Time (hours per ye	Cor	struction odification		Throu	ighput Emissic	Throug	gh This
	no	-	NA	ft ft²	NS	ft NA	ft/sec	N	Aft^3/min	23 °F	*	_hr/yr Jun		1968	Jan- Mar 25%	Apr- Jun 25%	Jul-Sep 25%	Oct Dec 25%
		Ty	pe of Fuel	Used and Heat	Input (see in	structions)					Operating Par	ameters (incl	ude uni	ts)				
Fuel			Туре о		Heat I	input (MMBTU	/hr)				o Post trong x tax	Parame	THE RESERVE OF THE PARTY.	T	D	escripti	on	-
del conserva	b		N/	A		NA				Rate/Throughput ing Rate/Throughp		3 MM lb NA	/yr				20 July 10 Jul	71.E)
	le le	1		Notes					THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER, THE O	Volume/Cylinder D	Displacement	22,164	gal					
		Emissio	ons from this	source are routed to	emission point	1700-80			Shell Height (ft)			27				e: -		
					P	2.00			Tank Diameter (fi	Fixed Roof	Floating Ro	12 of 🗆	Exte				T-4	1
								100	Date Engine Orde		T Touting NO	01	Engine 1	Name and Address of Party of Persons	'ear		III	ernal
										Built by Manufact	urer	1	Teligille i	I VIOUEI I	cai			
				39					SI Engines:	□ Rich Bu	The same of the sa	Lean Burn		2 Stro	ke	П	4 Strol	ke
	-	1700-80.	. (Designation	n) Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number		Pro	posed Emission R		Permitted Emission Rate (Current)	Add, Change, Delete, or	Contin	nuous liance	Con	centrat Exiting	on in (Gases
Polluta					76			rage /hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)	Unchanged	Met	hod		D.Mtting	at Diac	
STREET, SQUARE,	ate matte	r (PM ₁₀)															gr/s	std ft ³
Sulfur d																	CORPORATION AND ADDRESS OF THE PERSON NAMED IN	by vo
-	n oxides monoxid						-										_	by vo
-		Carlo	- 11 1 1 1	,													CONTRACTOR OF THE PERSON NAMED IN	by vo
Lead	OC (inch	loing thos	e listed belov	v) 000	0%			aje	0.04	ajt.	*	С						by vo
Ceau							-										ppm	by vo
																	STREET, SQUARE,	by vo
								1									ppm	by vo
-																	ppm	by vo

							St	ate of Lo	uisiana									Date of	submitt	al
						Emissions	Inventory Q) for Air	Pollutants									
									, , , , ,									Nov	20	013
E	nission F	Point ID N	No.	D	escriptive	Name of the	Emissions Source	(Alt. Name)		Т	Ā	pproximat	a Location	of Stack or V	Vant (see	I	4'			
		nation)						(Inter I turne)			A	рргодина	e Location	of Stack of	vent (see	instruc	cuons)			5.
	170	00-81				ACR R	efining Vent			Method				ing-Primary N				Datum	NAD8	3
Tem	po Subje	ct Item D	D No.							UTM Zone Latitude	30 0	5 Horiz	ontal 3	739000	mE 15		rtical	332		mN
	•									Longitude	-90 °		31 '		15	-				redths redths
64 1		20018																	Hallo	. I
	and Disc	charge cteristics		eter (ft) or St	ALL CONTRACTOR OF THE PARTY OF	Height of St			Stack Gas		Stack Gas Exit		al Operati		Date of		1000	ercent c		
	ge? (yes		Disch	arge Area ((ft ⁻)	Above Grade	e (ft) Veloc		Condition Standard		Temperature (°F)		Time rs per year		struction odificatio			ghput ' Emissio		
									Standard	(It /min)	(F)	(nous	is per year	, MI	oumcatio	711		Emissic	n Poin	
	no			0.33 ft		70.2 f	0.13	ft/sec	1	6021	82.85			Jul		2007	Jan-	Apr-	Jul-Sep	1
			_		1	70.2	0.13	TUSEC	1	_ft^3/min	82 °F	8,7	60 h	r/yr	1		Mar 25%	Jun 25%	25%	Dec 25%
				ft ²			5.								2		25 /0	2570	25 70	25 /0
		Ty	pe of Fue	el Used and	d Heat I	nput (see ins	structions)					Operati	ing Parai	neters (incl	ude uni	ts)				
Fuel				of Fuel		Heat I	nput (MMBTU/hr	•)						Parame			D	escripti	on	
	a		N	VA.			NA		Norm	nal Operating	Rate/Throughpu	it		1,123 lb	/hr					
	В										ng Rate/Through		_	NA						
	C			NT.							olume/Cylinder	Displaceme	ent	NA						
				INC	otes					Height (ft)			-	NA						
									Tank	Diameter (ft	Fixed Roof	Flo	ating Poof	NA	Exte				7 .	
										Engine Orde		FIO	ating Roof	<u> </u>	Engine I	-	Vane		Int	ernal
									_		Built by Manufac	cturer			Eligine i	Viouei	Leal			
									The same of the sa	ngines:	□ Rich B	Annual Service Co. Co. Co. Co. Co.		ean Burn		2 Stro	ke		4 Stro	ke
Emi	ssion Poi	int ID No	. (Designati		Control	Control	HAP / TAP	-			No.	Perm			T				-	
		1700-81			uipment Code	Equipment Efficiency	CAS Number		Proposed	Emission R	ates		on Rate	Add,	Contir	1110115				
					Code	Zancicacy	8	_ =				(Cur	rent)	Change, Delete, or	Compl	Signature state		centrat		The state of the state of
Polluta	nt				- 1		8	Average	e M	Iaximum	Annual	Ann	ual	Unchanged	Meth	hod		Exiting	at Stac	K
Danti au l		- (DM ()						(lb/hr)		(lbs/hr)	(tons/yr)	(tons	s/yr)		100					e e
Sulfur d	ioxide	r (PM ₁₀)																		td ft ³
Nitroge												-							_	by vol
-	monoxid	e						-	_			-			-					by vol
Total V	OC (inclu	uding thos	e listed belo	ow)	000	0%		1.00		10.00	2.20	2.3	20	U	1				THE OWNER OF TAXABLE PARTY.	by vol
Lead			2:									-			—				_	by vol
Hydrocl	loric aci	d			000	0%		0.3		4.5	0.7	0.	.7	Ü	1 ng na					by vol
																			Control of the last of the las	by vol
															1				ppm	by vol

							S	tate of	Louisian	ıa						D	ate of	submittal
-					Emission	s Inve	entory Q	uestio	nnaire (I	EIQ) for Air	r Pollutants					N	lov	2013
E		Point ID N (nation)	lo.	Descriptiv	ve Name of the	Emissio	ons Source	(Alt. Na	me)		A	pproximate Locat	ion of Stack or	Vent (see	instruct	ions)	<i>y</i>	
	170	00-82			ACR Solv	vent Ble	nd Tank			Method UTM Zon	e 1:	06,"Address Ma					-	NAD83
Tem	po Subj	ect Item II	No.							Latitude	30 0		739000	_mE	Vert	ical	3327	400 mN hundredth
		Γ0201								Longitude	<u>-90</u> °	31		15	н	_		hundredth
Physica	and Dis al Chara ige? (yes	cteristics		ft) or Stack Area (ft²)	Height of S Above Grad		Stack G	White was company of	Condit	Gas Flow at ions, <u>not</u> at rd (ft ³ /min)	Stack Gas Exit Temperature (°F)	Normal Oper Time (hours per y	Cor	Date of astruction odification	50.50	Throug	hput I	Annual Through Th
i ,	no		0.1	67 ft	30	ft	NA	ft/sec	NA	ft^3/min	25 °F	ale.	_hr/yr Sept	1	2007	Mar	Apr Jun 25%	Jul-Sep Od De 25% 25
		Ty	pe of Fuel Us	sed and Heat	Input (see in	structi	ons)					Operating Par	ometers (incl	udo uni				
uel			Type of Fu	iel			MBTU/h	r)				operating rai	Parame	-	3)	Des	criptic	n
	b b		NA			NA	λ				Rate/Throughputing Rate/Through		2,000 drui				Criptic	
	С				750						olume/Cylinder l		NA 060 as	la \				
				Notes	Y					nell Height (ft)	olume/Cymnder i	Displacement	960 ga	15				
			*Hours of v	enting vary per s	olvent used.					ank Diameter (ft	Υ		4					
				. 8						anks:	Fixed Roof	Floating Ro		Exter	nal	-		Interna
									D	ate Engine Orde				Engine N	-	THE RESERVE AND PERSONS NAMED IN		HITCHIA
										THE RESERVE AND ADDRESS OF THE PARTY OF THE	Built by Manufac	turer	T	Longino I	Todel 10	ai		
					78				Process of the Party of the Par	Engines:	Rich B		Lean Burn	0	2 Strok	e	П	Stroke
Emi olluta		nt ID No. 1700-82	(Designation)	Control Equipment Code	Control Equipment Efficiency	The state of the s	P / TAP Number		Propos	sed Emission R	ates	Permitted Emission Rate (Current)	Add, Change, Delete, or	Contin Compl	uous iance	Conce	entratio	on in Gases t Stack
	-							Aver (lb/	rage hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)	Unchanged	Meth	lod			
	ate matte	(PM ₁₀)																gr/std ft
ulfur d	THE OWNER WHEN PERSON NAMED IN																	ppm by ve
	oxides					10.0%											-	ppm by v
Married Woman or where	monoxide		1															ppm by v
	JC (Inclu	ding those	listed below)	000	0%			0.1	13	0.14	0.01	0.037	С					ppm by v
ead	orostl. 1									the contract of								ppm by v
	oroethyle			000	0%	-	27-18-4	0.4	40	0.56	0.01	0.01	С				-	ppm by v
-	(mixed is			000	0%	THE RESERVE AND PERSONS ASSESSED.	30-20-7	0.3		0.14	0.001	0.001	С					ppm by v
icnior	omethane			000	0%	0007	5-09-2	7.0	05	9.90	0.02	0.02	С					ppm by v

5,000,000						C								-	-				
							tate of Lo										Date of	submit	tal
					Emission	s Inventory Q	uestionna	ire (EIQ) for Ai	Pollutants							Nov	2	013
E	mission I	Point ID N	No.	Descrip	ive Name of the	Emissions Source	(Alt Name)		Т		Annuarin	ata I assti	6.51	**					
	(Desig	gnation)					(IAM I (MILE)				Approxim	ate Locati	on of Stack or	vent (see	instruc	ctions)			9.
	3	-95	1		Dive	rsion Tank			Method		06,"Ad	idress Mat	ching-Primary I	Name"			Datum	NAD8	3
OF.		-			*		*		UTM Zon			rizontal	739000	mE	Ver	tical		7400	mN
Tem	po Subje	ect Item I	O No.						Latitude	30 °		3	•	15	-			hunc	Tredths
	EO1	Γ0202							Longitude	°		31	.'	15				hunc	iredths
Stack	and Dis		Diam	eter (ft) or Stack	Height of S	stack Stack G	as Evit	Stack Gas	Florest	Stark Car Est	/4 NT-	10							
		cteristics		harge Area (ft ²)	Above Grad			Conditions		Stack Gas Exi Temperature		mal Opera Time		Date of		A100000	ercent		
Char	ige? (yes	or no)	2.00	and go mica (it)		(15)	200	Standard (Contract to the second	(°F)		urs per ye		nstruction lodification	No. of Contract of		ignput Emissi	-	gh This
		Í						Diamont G ((2)		F J -	1	Connection	***		Limbon	AL CILL	ı
	no		N	IA ft	NA	ft NA	6/	27.4					Sept Sept		1995	Jan-	Apr-	Jul-Sep	Oct-
		-		The state of the s	INA	ft NA	ft/sec	NA	_ft^3/min	77 °F	8	,760	hr/yr	1	1,,,,,	Mar	Jun		Dec
				ft ²			1									25%	25%	25%	25%
	T	Tx	ne of Fu	el Used and Hea	t Innut (ass in	et-motional													
Fuel		1		of Fuel		Input (MMBTU/h					Opera	iting Par	ameters (inc		ts)				
	a			NA NA	Heat	NA NA	r)	Norma	al Operation	Pata (Through -			Parame			D	escript	on	
	b				1	11/1				Rate/Throughpu			27,000 g	al/hr					
	С									olume/Cylinder			NA		-				
				Notes					Height (ft)	v olume/Cynnder	Displacei	nent	660,222	gal	. (Open tan	k WWI	treatm	ent
				110005					Diameter (f	Y			NA NA						
								Tanks		Fixed Roof	TE	loating Ro	NA T	Exte	rnal			T	
							1		Engine Orde			loading Ko	of 🗆	Engine I	-	7.00		Int	ernal
									THE RESERVE THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER.	Built by Manufa	acturer		T	Engine i	VIOGEI I	ear	-		
								SI En	STREET, SQUARE, SQUARE	□ Rich I	and the second second second		Lean Burn		2 Stro	ke		4 Stro	ke
Emi	ssion Poi	int ID No.	(Designat	tion) Control	Control	HAP/TAP	T				-	mitted	T	T	7540	T		· Del O	nc .
		2.05		Equipmen		CAS Number	20.0	Proposed 1	Emission B	ates		sion Rate	Add,				(8)		
		3-95		Code	Efficiency	熟		Troposeu	Emission r	ates	(Cı	urrent)	Change,	Compl		Con	centrat	ion in (Gases
Polluta	nt					3		1 37					Delete, or	Metl	SCHOOL SHEET STATE	1	Exiting	at Stac	:k
				Re			Average (lb/hr)		aximum lbs/hr)	Annual (tons/yr)		nnual ns/yr)	Unchanged						
Particul	ate matte	r (PM ₁₀)					(10/111)			(tons/j1)	(10	is/yt)		-					
Sulfur o	ioxide		,			in the								-					std ft ³
Nitroge	n oxides										_							THE RESERVE OF THE PERSON NAMED IN	by vol
Transmission program	monoxid										1			-				-	by vol
Total V	OC (inclu	uding thos	e listed bel	ow) 000	0%		< 0.01		< 0.01	< 0.01		0.21	С	1				_	by vol
Lead																		-	by vol
Chlorop				000	0%	00126-99-8	< 0.01		<0.01	< 0.01		0.19	С	1				_	by vol
Toluene				000	0%	00108-88-3	< 0.01		<0.01	< 0.01		0.01	С					_	by vol
																		-	hy vol

			*		100	S	tate of Lo	uisiana							Date o	f submittal
			(A)	81	Emission	s Inventory Q	uestionna	ire (EIC) for Ai	r Pollutants					Nov	2013
E		Point ID No).	Descriptiv	ve Name of the	Emissions Source	(Alt. Name)		1	Ā	Approximate Locat	ion of Stack or	Vent (see in	structi	ons)	
ž.	4	-95		B 8	Su	rge Tank			Method UTM Zon	1	06,"Address Ma 15 Horizontal					NAD83
Ten	po Subje	ect Item ID	No.		5				Latitude	30 °		739000	_mE 15 "	Vertic	cal 332	7400 mN hundredth
	_	Г0203		9					Longitude	-90 °	31	_'	15 "			hundredth
Physic	and Dis al Chara age? (yes	cteristics	Diameter (i Discharge		Height of S Above Grad		city	Stack Gas Conditions Standard (, <u>not</u> at	Stack Gas Exi Temperature (°F)		Con	Date of astruction o odification	995	Throughput Emissi	of Annual Through Thi on Point Jul-Sep Oc De 25% 256
	T	Typ	e of Fuel Us	ed and Heat	Input (see in	structions)					0 (1 7				20	
Fuel			Type of Fu			nput (MMBTU/hi	F)	-			Operating Par	The same of the sa	with the last term of t			
	a .		NA	,		NA	.)	Norm	1 Operating	Rate/Throughpu		Parame		-	Descript	ion
	b			Mark III	2 2					ing Rate/Through		27,000 ga	U/nr		A STATE OF THE STA	attender betreet in
	С									Volume/Cylinder		660,000	anl.	0-	1- 11/11/	
				Notes					Height (ft)	· oramor Cymraci	Displacement	NA	gai	Ор	en tank WW	treatment
									Diameter (f	1)		NA NA				
							1	Tanks	-	Fixed Roof	Floating Ro	And in case of the last of the	Externa	1		Internal
							1	-	ngine Orde		Tiouting No		Engine Mo	-		Internal
								-		Built by Manufa	cturer	T	Eligine Mo	del 1 e	at 1	
				-			1	SI En		□ Rich B	AND RESIDENCE OF COLUMN 2 AND PERSONS ASSESSED.	Lean Burn	□ 2	Stroke		4 Stroke
Emi		4-95	Designation)	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	44	Proposed			Permitted Emission Rate (Current)	Add, Change, Delete, or	Continue Complia Method	ous	Concentrat	ion in Gases at Stack
)		(DIA)				1.0	Average (lb/hr)		iximum bs/hr)	Annual (tons/yr)	Annual (tons/yr)	Unchanged	- ALACAMON			
ulfur d	ate matte	(PM ₁₀)														gr/std ft ³
-	oxides					10										ppm by vo
ATTENDED TO STATE OF	monoxide		3011	-	100	annay is managed to be a Replace	AS DELES 2									ppm by vo
-	STATE OF THE PARTY	manufacture of the contract of	:	000												ppm by vo
ead	oc (inch	iding those i	isted below)	000	0%		0.52		2.36	2.29	2.11	U				ppm by vo
Chlorop	rene			000	- 22											ppm by vo
oluene				000	0%	00126-99-8	0.5		2.14	2.17	1.99	Ü				ppm by vo
JIGCIIC				000	0%	00108-88-3	0.01		0.1	0.06	0.06	Ü				ppm by vo
	-															ppm by vo

_	printed and the same		- Carterior - Cart																
								State of	Louisia	ana		В					Date of	submitt	al
						Emissions	Inventory	Ouestion	nnaire	(EIQ) for Air	Pollutants								
										(228) 201 121							Nov	20	013
-				·/							77								
JE)		oint ID N	10.		Descriptive	Name of the	Emissions Sou	ırce (Alt. Na	me)	-	Ap	proximate Locati	on of Stack or V	ent (see i	instruc	tions)	4		
35		95	1				dia Trans			Mathad		06 114 11 36	1. D. M			#1 1			
	5-	93				Aera	tion Tank			Method UTM Zon	e 15	06,"Address Mate Horizontal		mE	Van	tical	Datum		mN
Tem	po Subje	ct Item II	D No.							Latitude	30 *	3		15		iicai .	332		redths
										Longitude	-90 °	31	•	15		,		A STANDARD OF	redths
		0204											-	(11)					, oddis
Stack	and Disc	charge			or Stack	Height of St		k Gas Exit		k Gas Flow at	Stack Gas Exit	Normal Opera	iting	Date of		P	ercent o	f Annu	ıal
	l Charac ge? (yes		Disc	charge A	rea (ft²)	Above Grad	e (ft) V	elocity		ditions, <u>not</u> at	Temperature	Time		struction			ighput '		
Chai	ige: (yes	or no)		~					Stan	dard (ft³/min)	(°F)	(hours per ye	ear) Mo	odification	n		Emissio	n Poin	t
							1							1 1		Jan-	Apr-	Jul-Sep	Oct-
	по		_1	NA	ft	NA	ft NA	ft/sec	N/	A ft^3/min	77 °F	8,760	hr/yr Sept		1995	Mar	Jun	l ar o o p	Dec
		- 1			2											25%	25%	25%	25%
			-		ft ²														
		Ty	pe of F	uel Used	l and Heat I	nput (see in	structions)					Operating Par	ameters (incl	ude unit	s)				
Fuel			Тур	e of Fuel		Heat I	nput (MMBT	U/hr)	1		3		Paramet	Name and Address of the Owner, where		D	escript	on	
	a			NA			NA			Normal Operating	Rate/Throughput	2 2	27,000 ga	l/hr				<i>X</i> :	
	b					- 8				Maximum Operat	ing Rate/Throughp	put	NA						
	С									Design Capacity/	Volume/Cylinder I	Displacement	660,000	gal	(Open tan	k WW7	treatm	ent
					Notes					Shell Height (ft)			· NA						
	3									Tank Diameter (f	1)		NA						
										Tanks:	Fixed Roof	Floating Ro	of 🗆	Exter	nal			Int	ernal
										Date Engine Orde				Engine N	Model Y	ear.			
										Contract of the Party of the Pa	Built by Manufact						:		
										SI Engines:	□ Rich Bu	urn 🗆	Lean Burn		2 Stro	ke		4 Stro	ke
Emi	ssion Poi	int ID No	. (Designa	ation)	Control	Control	HAP / TAI					Permitted							
		5-95			Equipment Code	Equipment Efficiency	CAS Numb	er	Pro	posed Emission F	lates	Emission Rate	Add,	Contin	uous				
					Code							(Current)	Change, Delete, or	Compli	iance		centrat Exiting		
Polluta	nt				1			Ave	erage	Maximum	Annual	Annual	Unchanged	Meth	od		Exiting	at Stat	.K
18						*		- X	o/hr)	(lbs/hr)	(tons/yr)	(tons/yr)							
	ate matte	r (PM ₁₀)										9						gr/s	std ft ³
Sulfur o																100		-	by vol
-	n oxides	6	,															ppm	by vol
-	monoxid																	ppm	by vol
-	OC (inclu	iding thos	e listed be	elow)	000	0%		<(0.01	0.03	0.02	0.02	U					ppm	by vol
Lead																		ppm	by vol
Chlorop	THE RESERVE OF THE PERSON NAMED IN				000	0%	00126-99-		0.01	0.02	0.02	0.02	U					ppm	by vol
Toluene 000 0% 00108-88-3									0.01	<0.01	<0.01	<0.01	U						by vol
II .										1		1	1					nnm	by vol

				5	State of I	Louisiar	ia							Date	of submit	tal
			Emissions	s Inventory (Question	naire (I	EIQ) for Ai	r Pollu	tants			80		Nov	2	013
Emission Point ID No. (Designation)		Descriptiv	e Name of the	Emissions Source	ce (Alt. Nam	ne)	· T		Ap	proximate Locati	ion of Stack or	Vent (see	instructi	ons)		
1700-83			ACR Dr	umming Vent			Method UTM Zor		15	06,"Address Mat					m NAD8	
Tempo Subject Item ID No.							Latitude Longitude	30	0		739000	_mE 15	-	cal 3	hund	mN dredth dredth
RLP0019			and the second			W 011 DE			•				_	-	nunc	neoui
DI I I CU	Diameter (ft) o Discharge Ar	OCON GOMESTIC STREET	Height of S Above Grad	and the same of	Gas Exit ocity	Condit	Gas Flow at ions, <u>not</u> at rd (ft ³ /min)	Tempe	Gas Exit erature F)	Normal Opers Time (hours per ye	Cor	Date of astruction odification		Throughp	nt of Annu ut Throug ssion Poin	gh Th
no		ft		ft NA	_ft/sec	NA	ft^3/min	NA	°F	8,760	hr/yr Sept		2007	Jan- Ap Mar Ju 25% 25		p Oc De 25
Туре о	of Fuel Used	and Heat I	nput (see in	structions)				-		Operating Par	ameters (incl	ude uni	ts)			
Fuel	Type of Fuel		Heat I	nput (MMBTU/	hr)					X	Parame	STATE OF THE OWNER, WHEN PERSONS AND PARTY AND PARTY AND PARTY AND PARTY AND PARTY AND PARTY AND PARTY.	1	Descr	ntion	
a b constant	NA			NA			ormal Operating			ut	2,000 drui NA	and the particular parties and			-	
С						D	esign Capacity/	Volume/C	ylinder D	isplacement	NA	2.				
		Notes				SI	nell Height (ft)				NA					
These emissions are from an ope			ith a ventilation	n fan to minimize	employee	Ta	ank Diameter (f	t)			NA					
4		exposure.				T	anks:	Fixed	Roof	Floating Ro	of \square	Exte	rnal	П	Int	terna
·			3 . [*]			D	ate Engine Orde	ered				Engine l	Model Ye	ar		
			, .			D	ate Engine Was	Built by N	Manufacti	urer						
		-				SI	Engines:		Rich Bu	rn 🗆	Lean Burn		2 Stroke		4 Stro	ke
Emission Point ID No. (Des	signation)	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number		Propo	sed Emission I	Rates		Permitted Emission Rate (Current)	Add, Change, Delete, or	Contin Comp			ration in (
Pollutant					Avera		Maximum (lbs/hr)		nual s/yr)	Annual (tons/yr)	Unchanged	Met	hod	EXIL	ng at Stac	K
Particulate matter (PM ₁₀)												+	_			std ft
Sulfur dioxide												1				by v
Nitrogen oxides					1							-			THE RESERVE OF THE PERSON NAMED IN	by v
Carbon monoxide												1				by v
Total VOC (including those liste	ed below)	000	0%		0.20	0	0.35	0.0)20	0.340	С	1			THE RESERVE OF THE PARTY OF THE	by v
ead																by v
Tetrachloroethylene		000	0%	00127-18-4	0.0	4	0.08	0.0	01	0.01	U					by v
Xylene (mixed isomers)		000	0%	01330-20-7	0.00		0.02	0.0	001	0.001	U					by v
Dichloromethane		000	0%	00075-09-2	0.10	0	1.44	0.0	02	0.02	U					by v

-																				
				·			St	ate of Lo	uisiana								(D	ate of	submitt	ai
					Emissions	Inven	tory O	uestionn	aire (EI	O) for Air	r Pollutar	nts						- 1		
							, T		(22	2) 101 111	. I Ollutul						I	lov	20)13
								- 14												
E		Point ID N	No.	Descriptive	e Name of the	Emission	s Source	(Alt. Name))			Approx	imate Locatio	on of Stack or V	ent (see	instruct	tions)			
	_	mation) 0-84A		Admonac	Trus Cont	(AEC)		C1		24-4-4										
	1700	J-04A		Advance	e Fibres Syster (Emulsio			Shipping		Method UTM Zon			Address Mate	ching-Primary N		**			NAD83	
Tem	po Subje	ct Item II	D No.		(Emusio	ii Dienu	Lauk)			Latitude	30 °	15	Horizontal 3		mE 15	Vert	ical _	3327		mN redths
										Longitude			31		15	-	_			redths
i dec	EQT	Γ0212								Longitude					13	-	· -		Hulld	reduis
	and Dis		Diame	ter (ft) or Stack	Height of S	tack	Stack Ga	s Exit	Stack Ga	Flow at	Stack Gas	Exit N	ormal Opera	ting	Date of		Per	rcent o	f Annu	al
0.00		cteristics	Disch	arge Area (ft²)	Above Grad	le (ft)	Veloc	ity	Condition	ıs, <u>not</u> at	Temperat	7	Time		struction	or	Throug			
Char	ige? (yes	or no)	2						Standard	(ft ³ /min)	(°F)		(hours per ye	ar) Mo	dificatio	n			n Point	
	no		N/	A ft	NA	ft N	٨	ft/sec	NA	ft^3/min	NA °F		9.760	, ,		2008		2	Jul-Sep	
		.	-112	·"	- IVA			TUSEC	INA	10.3/11111	NA °F	·	8,760	hr/yr		1	Mar 25%	Jun 25%	25%	De
		- 1		ft ²				a .			1			1		- 1	2370	2370	2370	259
	T	Ty	vne of Fue	l Used and Heat I	nnut (see in	structio	ne)					One	anoting Don	amatana Grah	. d !					
Fuel				of Fuel			MBTU/hr	-)	-			Ope	eraung Par	ameters (inch	Name and Address of the Owner, where	is)	-		-	
	a			A	- Iteat I	NA NA	TID I C/III	.,	Non	nal Oneratin	g Rate/Throug	ahput		Paramet	er	-	De	scripti	on	
	b										ting Rate/Thro			NA					-	
	С										Volume/Cylin	- ·		NA NA		-				_
				Notes					-	l Height (ft)	v Olume/Cym	ilder Dispia	cement						-	
				Tiotes							**		e** (NA						
								-4	-	Diameter (f	Fixed Ro		Floating D	NA		<u> </u>				
									Tan			001	Floating Roo	of 🗆	Exte				Inte	ernal
				244					-	Engine Ord		· ·			Engine I	Model Y	ear			
									-	ngines:	Built by Mar	ich Burn		I P		3.01			101	
Em	ission Po	int ID No	. (Designati	on) Control	Control	HAD	/ TAP		31.6	ngmes:	□ Ri			Lean Burn		2 Strol	ke		4 Strol	(e
N. I.	1331011 X U	1110 110	. (Designan	Equipment	Equipment	CAS N	Se Transmission of						Permitted nission Rate			1				
		1700-84	A	Code	Efficiency	CIAD I	unio ci		Propose	d Emission I	Rates	100	(Current)	Add, Change,	Contin	uous	C			٦
													(0)	Delete, or	Compl				on in C	
Polluta	nt		(Averag	ge I	/laximum	Annua	al	Annual	Unchanged	Metl	hod		Manua .	at Otac	
								(lb/hr)	(lbs/hr)	(tons/y	r)	(tons/yr)							
CONTRACTOR OF THE PARTY OF THE	late matte	r (PM ₁₀)																	gr/s	std ft ³
Sulfur						14														by vo
-	n oxides																		ppm	by vo
	monoxid		11					5											ppm	by vo
-	OC (inch	uding thos	se listed belo	w) 000	0%			<0.01		<0.01	< 0.01	1	<0.01	U					ppm	by vo
Chloro	arane.			200	0.5														ppm	by vo
Chloroj Toluen				000	0%	00126		<0.01	_	<0.01	<0.01		<0.01	U					ppm	by vo
loluen				000	0%	00108	3-88-3	< 0.01		<0.01	< 0.01		<0.01	U		10.			ppm	by vo
											1								nnm	by vol

-															
				The second secon	27	S	tate of Loui	siana						Date of	submittal
				ě?	Emission	s Inventory Q)uestionnair	e (EIQ) for Ai	r Pollutants						
						W								Nov	2013
E	mission	Point ID N	No.	Descriptiv	e Name of the	Emissions Source	(Alt Name)					7 11 1			
	100	gnation)				ZAMASSIONS SOULCE	(ALL IVALLE)	1	Aţ	pproximate Locat	ion of Stack or	Vent (see i	nstruct	ions)	
	170	0-84B	1	Advanc	e Fibres Syste	m (AFS) Emulsion	Shipping	Method	15	06,"Address Ma	ching-Primary N	lame"	17	Datum	NAD83
Ten	no Subi	ect Item II	D No.		(Tot	e Loading)		UTM Zor		Horizontal	739000	mE	Vert		7400 m
A CM	ipo Bubj	ect item i	D No.					Latitude	30 °			15			hundre
		Т0213						Longitude	<u>-90</u> °	31	-	15	**		hundre
Stack	k and Dis	charge	Diameter (f	t) or Stack	Height of S	stack Stack G	as Exit St	ack Gas Flow at	Stack Gas Exit	Normal Oper	ating	Data of		P	£ A
Physic	al Chara	cteristics	Discharge	Area (ft ²)	Above Grad		The second secon	onditions, not at	Temperature	Time		Date of struction	or	Throughput	of Annual
Chai	nge? (yes	or no)						andard (ft ³ /min)	(°F)	(hours per ye		odification			n Point
								**************************************	, , ,			1 1			
	no		NA	ft	NA	ft NA	ft/sec	NA ft^3/min	NA °F	8.760	h=/	- 1	2008		Jul-Sep
			-			1111	-10300	I STILLI	INA F	8,760	hr/yr	1	-	Mar Jun 25% 25%	25%
-				— ft²							1		- 1	2570 2570	2370
		Ту	pe of Fuel Use	ed and Heat	nput (see in	structions)		1		Operating Par	ameters (incl	udo unito			
uel	-	J. 100	Type of Fue			nput (MMBTU/h	r)		-	Operating rai	Paramet	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	5)	Descript	on
	a		NA			NA		Normal Operating	Rate/Throughput	,	A MANAGE	- CI		Descript	TOTA .
	b					₁₇ 10		Maximum Opera	ing Rate/Throughp	out	NA				
	С								Volume/Cylinder D		NA				
_				Notes				Shell Height (ft)			NA				
								Tank Diameter (f	t)		NA			E.	
								Tanks:	Fixed Roof	Floating Ro	of 🛮	Exterr	ıal		Intern
								Date Engine Ord				Engine M	lodel Ye	ear	
								AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NAMED IN THE OWNER, THE PERSON NAMED IN THE PERSON NAMED IN THE OWNER, THE PERSON NAMED IN THE PER	Built by Manufact	The second secon					
Em	ission Po	int ID No.	(Designation)	Control	Control	HAP/TAP		SI Engines:	□ Rich Bu		Lean Burn		2 Strok	e 🗆	4 Stroke
			(Designation)	Equipment	Equipment	CAS Number				Permitted					
		1700-84E	3	Code	Efficiency		Pi	roposed Emission I	lates	Emission Rate (Current)	Add, Change,	Continu	ious	C	
				_						(Garrent)	Delete, or	Complia		Concentrat	ion in Gas at Stack
olluta	nt					* *	Average	Maximum	Annual	Annual	Unchanged	Metho	od	***************************************	ar Duck
articul	ate matte	r (PM)					(lb/hr)	(lbs/hr)	(tons/yr)	(tons/yr)					
	lioxide	- (1 1110)													gr/std
-	n oxides														ppm by
-	monoxid	e						-							ppm by
otal V	OC (inch	ding those	e listed below)	000	0%		< 0.01	<0.01	<0.01	<0.01	U		_		ppm by
ead							-0.01	-0.01	NO.01	VU.U1	0	-	-		ppm by
hlorop				000	0%	00126-99-8	< 0.01	< 0.01	< 0.01	<0.01	Ü		-		ppm by
oluene	2			000	0%	00108-88-3	< 0.01	<0.01	<0.01	<0.01	U				ppm by
															ppm by

							St	ate of I	ouisiana								Date of	submitt	al
						Emissions	Inventory Q	uestion	naire (El	Q) for Air	Pollutants						Nov	20	013
Er		oint ID N	10.		Descriptive	Name of the	Emissions Source	(Alt. Nam	ie)	T	Ap	proximate Location	on of Stack or V	ent (see i	instruc	tions)			
		nation) 0-85				Liquid Disp	persion Loading			Method		06,"Address Mate	ching-Primary Na	ame"		1	Datum	NAD83	3
Tem		ct Item II	O No.			(Truck, Tote,	Railcar Loading))		UTM Zon Latitude Longitude	30 °	Horizontal 3		mE 15	n .	tical -	3327	hund	mN redths redths
Physica	and Disc	eteristics		neter (ft) charge Ai	2000 -	Height of St Above Grad			Conditio	as Flow at ons, <u>not</u> at	Stack Gas Exit Temperature	Normal Opera Time (hours per ye	Cons	Date of struction		Throu	ercent o	Throug	h This
	no					NA	ft <u>NA</u>	ft/sec	NA		NA_°F		hr/yr		2008	Jan- Mar 25%		Jul-Sep	
			.0.173		ft ²										=				
Fuel		13			and Heat I	nput (see ins		<u>, </u>				Operating Par	the Real Property lies and the last of the		ts)				
ruei	2		Тур	e of Fuel NA		Heat I	nput (MMBTU/hi NA	r)	No		Data (Thankana)		Paramet	er		D	escripti	on	
	b			IVA			INA			352	Rate/Throughput		NA						
	c								1		ing Rate/Through		NA NA						
					Notes				-	ell Height (ft)	Volume/Cylinder I	Displacement	NA NA						
					110163					ik Diameter (f	1)		NA NA		-				
										nks:	Fixed Roof	Floating Ro	_	Exter	mal			Int	ernal
										e Engine Orde		1 Todding No		Engine N	-	/ear		ши	Ciliai
									-	the last of the la	Built by Manufact	turer		Engine 1	VIOGET 1	cai			
								1	-	Engines:	Rich Bu	THE RESERVE THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER.	Lean Burn		2 Stro	ke		4 Strol	ke
Emi	ssion Poi	1700-85	, 0	ation)	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number			ed Emission F		Permitted Emission Rate (Current)	Add, Change, Delete, or	Contin Compl	iuous	Con	centrat Exiting	ion in (Gases
Polluta	nt				8			Aver (lb/)	9	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)	Unchanged	Meth	hod	3	caring	at Stac	
-	ate matte	r (PM ₁₀)	8 3								l						-	gr/s	td ft ³
Sulfur d																			by vol
-	n oxides																	The Real Property lies, the Person lies,	by vol
-	monoxid																		by vol
	OC (inclu	uding thos	e listed b	elow)	000	0%		0.0	03	0.003	0.01	0.01	U					ppm	by vol
Lead																12 94		ppm	by vol
Chlorop	-				000	0%	00126-99-8	0.0		0.003	0.01	0.01	U					ppm	by vol
Toluene					000	0%	00108-88-3	<0.0	001	<0.001	<0.001	<0.001	U					10-1	by vol
																		ppm	by vol

						St	ate of Louisi	ana						Date of	submit	tal
	-	8	,		Emission	s Inventory Q	uestionnaire	(EIQ) for Ai	r Pollutants					Nov	20	013
E		n Point ID I	No.	Descripti	ve Name of the	Emissions Source	(Alt. Name)		Ap	proximate Locat	on of Stack or	Vent (see inst	ructions)			-
		1-93			Fugitive Emiss	ions - Neoprene U	nit	Method UTM Zor	ne 15	06,"Address Mat				_	NAD8	
Ten		ject Item I	D No.					Latitude Longitude	30 °	_	739000	mE 15 "	Vertical	332	hund	mN fredths
Stack		JG0004 Pischarge	Diame	ter (ft) or Stack	T dela esc						.				. mana	reating
Physic	al Chai	acteristics es or no)		arge Area (ft ²)	Height of S Above Grad		city Con	ck Gas Flow at additions, <u>not</u> at addard (ft ³ /min)	Stack Gas Exit Temperature (°F)	Normal Opera Time (hours per ye	Con	Date of struction or odification		Percent oughput Emission	Throug	h This
	no	_	NA	A ft	NA	ft NA	ft/sec N.	A ft^3/min	NA °F	8,760	_hr/yr		Jan- Mar 25%	Apr- Jun 25%	Jul-Sep 25%	Oct- Dec 25%
		Ty	pe of Fue	l Used and Heat	Input (see in	structions)		I		Operating Par	ameters (incl	ude units)				
Fuel			Туре	of Fuel	Heat I	nput (MMBTU/hr	-)			Transport de	Paramet			Descript	on	
	a		N	A		NA		Normal Operating	g Rate/Throughput		NA			Descripti	OII.	
	b		-					Maximum Operat	ting Rate/Throughp	out .	NA					
-	C					0.00		Design Capacity/	Volume/Cylinder D	Displacement	NA					
				Notes				Shell Height (ft)			NA					
								Tank Diameter (f	t)		NA					
								Tanks:	Fixed Roof	Floating Ro	of \square	External			Inte	ernal
				*			1	Date Engine Orde	ered			Engine Mode	el Year			
								Date Engine Was	Built by Manufact	urer	8		5	***************************************		
Emi	colon T	-1-4 TD NI-	(D 1 11		, ,			SI Engines:	☐ Rich Bu	rn 🗆	Lean Burn	□ 2S	troke		4 Strol	ke
Polluta		1-93	(Designati	On) Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Pro	posed Emission F	lates	Permitted Emission Rate (Current)	Add, Change, Delete, or	Continuou Compliane	('0	ncentrat Exiting		
		(3)					Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)	Unchanged	Method				
		ter (PM ₁₀)													gr/s	td ft ³
Sulfur d	-															by vol
Nitroge															water and the same of	by vol
Carbon Total V	-	-	listed 1 - 1													by vol
Lead	JC (inc	nuding those	e listed belo	w) 000	0%		0.57	0.57	2.23	2.23	U					by vol
Chlorop	rene			000	0.00	00106.00.6									-	by vol
Toluene				000	0%	00126-99-8	0.37	0.37	1.60	1.60	U				ppm	by vol
THE RESERVE TO A STREET THE PERSON NAMED IN	THE OWNER OF TAXABLE PARTY.	isomers)		000	0%	00108-88-3 01330-20-7	0.05	0.05	0.22 -	0.22	U				ppm	by vol
				000	U70	01330-20-7	<0.01	< 0.01	0.02	0.02	U				ppm	by vol

Emission Point ID No. (Designation) 1-93	Control Equipment Code	Control Equipment Efficiency	HAP/TAP CAS Number	Pro	posed Emission R	ates	Permitted Emission Rate (Current)	Add, Change, Delete, or	Continuous Compliance	Concentration in Gases Exiting at Stack
Pollutant			lk	Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)	Unchanged	Method	
Dichloromethane			00075-09-2	< 0.01	< 0.01	0.02	0.02	U		ppm by vol
Tetrachloroethylene			00127-18-4	< 0.01	< 0.01	0.02	0.02	U		ppm by vol

			81				State of	Louisi	ana					-		Date of	suhmit	tal
					Emission	s Inventory			(EIQ) for Ai	r Pollutants								
															1	Nov	2	013
F	Emission 1	Point ID	No.	Descriptiv	ve Name of the	Emissions Sou	(A14 NI-									-		
		gnation)		Description	c Ivallie of the	Emissions 500	irce (Ait. Na	me)		A	pproximate Locat	ion of Stack or	Vent (see	instruct	tions)			
t	6	-95			(Clarifier			Method		06,"Address Ma	tching-Primary N	Vame"		I	Datum	NAD8	3
Ton	Culit	ect Item I	DAY						UTM Zon		5 Horizontal	739000	mE	Vert		3327	-	mN
1 en	ipo subje	ect Item I	D No.						Latitude	30 °		3 '	15	•	_		hund	Iredths
	The second secon	QT							Longitude	-90 °	31	_'	. 15		-		hund	lredths
	k and Dis			er (ft) or Stack	Height of S	Control of the Contro	Gas Exit	Stac	k Gas Flow at	Stack Gas Exit	Normal Opera	ating	Date of	T	Pe	rcent o	f Annu	ıal
(00)	ar Charac nge? (yes	or no)	Discha	irge Area (ft²)	Above Grad	de (ft) V	elocity		ditions, <u>not</u> at	Temperature	Time	Cor	struction					h This
	inge. (Jes	or no)						Stan	dard (ft³/min)	(°F)	(hours per ye	ear) M	odificatio	n	I	Emissio	n Poin	t
34	no		NIA	6.								Sant		1005	Jan-	Apr-	Jul-Sep	Oct-
		-	NA	ft	NA '	ft NA	ft/sec	N/	ft^3/min	77 °F	8,760	hr/yr Sept		1995	Mar	Jun		Dec
		- 1		ft ²		1				1	100			1	25%	25%	25%	25%
	T	Ty	ne of Fuel	Used and Heat	nnut (see in	etructions)				L				二				
Fuel		1	Type of			Input (MMBTI	I/hr)				Operating Par	The state of the s		s)				
	a		N/	the state of the s	Azeat 3	NA			Normal Operating	Pate/Throughout		Parame	State of succession in comments of the		De	scripti	on	
	b		4						Maximum Operat			27,000 ga NA	wir				-3-1 to 16	
	С								Design Capacity/			125,000	nal	0	pen tank	WWT	traatm	
				Notes					Shell Height (ft)		Diopiacomont	NA	Bar		pen tank	44 44 I	псани	ent
									Tank Diameter (ft)		NA				-	-	
									Tanks:	Fixed Roof	Floating Ro		Exter	nal			Inte	ernal
									Date Engine Orde	red		- Anna Anna Anna Anna Anna Anna Anna Ann	Engine N	Iodel Ye	ear			
									Date Engine Was	Built by Manufac	turer							
Emi	ecion Doi	nt ID No	(Designatio	\					SI Engines:	□ Rich B	urn 🗆	Lean Burn		2 Strok	e		4 Strol	ce
Eiii	551011 1 01	6-95	(Designatio	n) Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	8	Proj	posed Emission R	ates	Permitted Emission Rate (Current)	Add, Change, Delete, or	Contin			entratio		
Polluta	925				5 ge 2		Aver (lb/	rage (hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)	Unchanged	Meth	od	E.	xiting a	t Staci	
The Real Property lies and the least lies and the li	ate matter	(PM ₁₀)							-					_			arla	td ft ³
Sulfur d	the same of the sa								> x			-				-		by vol
	n oxides monoxide																the facilities for the same of the same of	by vol
		7.5	listed below	000														by vol
Lead	oc (men	unig mose	nsted Delow	000	0%		<0.	.01	<0.01	<0.01		A					ppm l	by vol
Chlorop	rene			000	0%	00126-99-8	<0.	01	-0.01	0.01							ppm	by vol
Toluene	_			000	0%	00120-99-8	<0.		<0.01	<0.01 <0.01		A				-	ppm l	by vol
						00100 000	- 20.		\U.U1	CU.U1		. A		_			The Parks of the P	by vol
						The second secon					1	Total Control of the					nnm	DVVOI

			81				St	ate of I	Louisiana							Т	Date of	submitt	al
						Emissions	Inventory Q	uestion	naire (EI() for Air	Pollutants							2.0	
																	Nov	20	013
E	nission I	Point ID N	No.	Desc	criptive	e Name of the	Emissions Source	(Alt Nan	ne)		An	proximate Locati	on of Ctools on X	7					
		gnation)						(*************************************	icj		Ap	proximate Locati	on of Stack or v	ent (see	instruc	tions)			
	170	00-87			No.	10 Emulsion 8	Storage Tank Mai	nway		Method		06,"Address Mat			0 0		Datum	NAD8	3
Tem	no Subie	ect Item I	D No							UTM Zon	30 0		739000	mE		tical	3327		mN
2 0111	po Buoje	ct Atemi A	D 140.							Longitude	-90 °	31		15		1.5			redths
		QTO								Longitude	-90	31	-	15		-	3.6	hund	redths
	and Dis		Diam	eter (ft) or Stac	ek	Height of St		as Exit	Stack Gas		Stack Gas Exit	Normal Opera	iting	Date of		Pe	ercent o	f Annu	al .
	ge? (yes	cteristics	Disc	harge Area (ft²)	Above Grad	e (ft) Veloc	city	Condition	The second secon	Temperature	Time	10 mg	struction	22289	Throu	ghput	Throug	h This
Citati	ge. (Jes	01 110)							Standard	(ft ³ /min)	(°F)	(hours per ye	ear) Mo	odificatio	n	1	Emissio	n Poin	t
	no												1		2012	Jan-	Apr-	Jul-Sep	Oct-
		-	_	0.167 ft		55 1	ft 60.00	ft/sec	750	_ft^3/min	77 °F	81	hr/yr		2013	Mar	Jun		Dec
				ft ²							- 2		.			25%	25%	25%	25%
		T,	ma of Fra	al IIaad and I	T43			-											
Fuel	-	1		el Used and l	Heat		THE RESERVE AND ADDRESS OF THE PARTY OF THE					Operating Par	The second secon	-	s)				
	a		THE RESERVE AND PERSONS NAMED IN	NA		Heat I	nput (MMBTU/h	()	Norm	al Operation	Rate/Throughput		Paramet			D	escripti	on	
	b					7	IVA				ing Rate/Throughp	*	42,000 lb/c	harge					
	С										olume/Cylinder D		NA NA						-
				Note	es				The second second	Height (ft)	olumer Cymider D	rispiacement	NA NA						
	59-5-9			13						Diameter (ft)		NA						
								1	Tank		Fixed Roof	Floating Ro	The same of the sa	Exter	nal			Inte	ernal
									Date	Engine Orde	red			Engine N	Aodel Y	ear			
								- 1	Date	Engine Was	Built by Manufacti	urer							
	, ,								SI E	ngines:	□ Rich Bu	ırn 🗆	Lean Burn		2 Stro	ke		4 Strol	ke
Emi	ssion Po	int ID No.	. (Designa			Control	HAP/TAP					Permitted							
		1700-87		Equip Co	The state of the s	Equipment Efficiency	CAS Number	ĺ	Proposed	Emission R	ates	Emission Rate (Current)	Add,	Contin	uous				
												(Current)	Change, Delete, or	Compli			centrati Exiting		
Polluta	nt							Aver	age M	laximum	Annual	Annual	Unchanged	Meth	od		caiding	at Stac	K
D. 4' . 1		(D) ((lb/l	hr)	(lbs/hr)	(tons/yr)	(tons/yr)							
Sulfur d	-	er (PM ₁₀)						-										gr/s	td ft ³
-	noxides																	-	by vol
	monoxid	le																THE OWNER OF TAXABLE PARTY.	by vol
		The state of the s	e listed bel	low) 00	00	0%		30.	25	4097	1.23		A	-					by vol
Lead								50.			1.25		A						by vol
Chlorop	The residence of the last of			00	00	0%	00126-99-8	20.:	57	2527	0.83		A						by vol
Toluene				00	00	0%	00108-88-3	3.2	22	785	0.13		À						by vol
																			by vol

-	The same of the last of the la	The same of the sa	-			None of the same	The feeting of the Park State of												
							S	tate of L	ouisiana					_			Date of	submit	tal.
						Emissions	Inventory (Question	naire (EIC	() for Ai	r Pollutants						Nov	2	013
		8					to the state of										1107		013
E		Point ID N	lo.		Descriptive	Name of the	Emissions Source	e (Alt. Nam	e)	T		Approximate Loc	ation of Stack o	r Vent (see	e instruc	tions)			
		gnation) 00-88			NT-	1277 11 6				1.7.1.1		0.6 11 4 4							
	170	70-08	1		140.	13 Emulsion 5	Storage Tank Ma	anway		Method UTM Zon		15 Horizontal	fatching-Primary 739000	Mame" mE	Vo	tical	Datum	NAD8 7400	mN
Ten	po Subj	ect Item II	D No.							Latitude	30 0	13 Horizontai	3		5 "	ucai -	332		redths
								o. 050 II		Longitude	-90 °		31 '	1.	5 "			(0)	iredths
		QT0																	
	and Dis	charge cteristics			or Stack	Height of St			Stack Gas		Stack Gas Ex		275	Date of			ercent o		
	ige? (yes		Disc	charge A	rea (ft*)	Above Grad	e (ft) Velo	city	Condition		Temperature	THE RESIDENCE OF THE PARTY OF T	1000	onstructio Modificati	The second second		ghput ' Emissio	-	CONTRACTOR OF THE PARTY OF THE
									Standard	(It /min)	(°F)	(hours per	year)	Widdingan	OII		CHISSIC	ni r om	
	no	. 1		0.147							la la				2013	Jan-	Apr-	Jul-Sep	Oct-
		-	-	0.167	ft	55	60.00	0 ft/sec	750	_ft^3/min	77 °F	26	hr/yr	1	2013	Mar	Jun	250	Dec
		- 1			ft ²							ĺ	I			25%	25%	25%	25%
_	T	T	mo of E	val IIIaa	d and Heat I		4 4 1												
Fuel	-	I y		e of Fuel			aput (MMBTU/l					Operating P	arameters (in	_	its)				
a weg	a			NA		near	NA	IF)	Norn	nal Operating	Rate/Throughp	unt.	42,000 li	_	-	D	escripti	ion	
	b			(1177				ing Rate/Through		42,000 N		1-				
	С										Volume/Cylinde		N		+				
					Notes				_	Height (ft)	· oranic cylinds	Displacement	N						
										Diameter (f	t)		N	A SHARWAY THE RESERVE AND ADDRESS OF THE PARTY OF THE PAR					
								10	Tank	s: 🗆	Fixed Roof	Floating	Roof 🗆	Exte	ernal	3		Int	ernal
									Date	Engine Orde	ered			Engine	Model ?	r ear			
								1	A DESCRIPTION OF THE PERSON NAMED IN	Married Street and Address of the Owner, where the Personal Property lies	Built by Manufa	THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.		, and					
W7									SIE	ngines:	□ Rich		Lean Burn		2 Stro	ke		4 Stro	ke
Em	ission Po	1700-88	,	ation)	Control Equipment Code	Control Equipment Efficiency	HAP/TAP CAS Number		Proposed	Emission I	Rates	Permitted Emission Rat (Current)	e Add, Change, Delete, or	Comp	inuous oliance	3202.77	centrat Exiting		
Polluta		25				292		Avera	9	laximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)	Unchange		thod				
		er (PM ₁₀)																gr/	std ft ³
-	dioxide																		by vol
-	n oxides		ir (7.6%)															STREET, SQUARE, SQUARE	by vol
-	monoxio	-	- 12-4 1.1	1>	200	0.00												of the Parket of	by vol
Lead	OC (Incl	uding thos	e usted be	elow)	000	0%		46.4	1	4097	0.60		A					-	by vol
Chloro	огепе				000	0%	00126-99-8	40		2527	0.52							THE OWNER OF TAXABLE PARTY.	by vol
Toluen					000	0%	00126-99-8	2.14	-	2527 785	0.52		A						by vol
					000	0 /0	00100-00-3	2.12		103	0.020	_	A	-					by vol
and the same of the same of	-										1				-			ppn	by vol

					13			State	e of Louis	siana											Date of	submit	al
						Emissions	Invent	ory Que	stionnair	e (EIQ	for Air	Pollut	tants		*						Nov	l	013
																					1407	2	313
Er		Point ID	No.		Descriptive	e Name of the	Emissions	Source (Al	t. Name)				Ap	proxima	ate Locati	on of Sta	ck or V	Vent (see	instruc	tions)			
		mation) 00-89			1			e al escare		-	¥0								AND LA CAC	erores)			
	170	10-89			No.	14 Emulsion	Storage T	ank Manwa	y	S 8	Method		15		dress Mat						Datum		3
Temp	o Subje	ct Item I	D No.								UTM Zone Latitude	30	15	Hori	izontal 3	739	000	mE 15		tical	332		mN
			*								Longitude	-90			31	-		15	-	92			redths
Ct. I		OTÇ						22			Silve		•			-		13	-			nunc	redths
Physica	and Dis	charge cteristics,			or Stack	Height of S		Stack Gas E	1000 PM	ack Gas F		Stack G	as Exit	Norn	nal Opera	ating		Date of		P	ercent (of Annu	al
	ge? (yes		Disc	charge A	rea (ft*)	Above Grad	e (ft)	Velocity	100000000000000000000000000000000000000	onditions,		Tempe	etropic district		Time			struction		Throu	ghput '	Throug	h This
							- 1		Sta	andard (fi	/min)	(°)	F)	(hou	urs per ye	ear)	Mo	odificatio	n		Emissio	n Poin	t
	no			0.160					1							- 1		1		Jan-	Apr-	Jul-Sep	Oct-
		-	-	0.167	_ft	55	ft	60.00 ft/s	ec 7	750	ft^3/min	77	°F	:	26	hr/yr			2013	Mar	Jun		Dec
					ft ²		- 1													25%	25%	25%	25%
		T	of E	vol I I co	d and Heat I																		
Fuel		1		e of Fuel		THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	THE RESERVE AND PERSONS NAMED IN			-				Opera	ting Par	_			ts)		-	0.	
	a			NA	-	neat1	nput (MIN	LB I U/hr)		Norma	0======================================	D-t- (Th-	1 .				aramet	of the last of the		D	escripti	on	
	b						1171		_		Operating					42,0	000 lb/cl	harge	_				
	С										Capacity/\				ont		NA NA						
					Notes						eight (ft)	Oldino, C.	ymidel D	ispiacen	ient	 	NA						
											iameter (ft)				-	NA						
										Tanks:		Fixed	Roof	Fl	oating Ro	of		Exter	rnal			Int	ernal
										Date E	ngine Orde	red			T			Engine N		ear		2110	-
						2				Date E	ngine Was	Built by N	Manufacti	urer				_ a 2					
Emi	eian Dai	-A TD N	(Deed							SI Eng	ines:		Rich Bu	rn		Lean B	urn		2 Stro	ke		4 Strol	ke
Ein	sion Po	int in No	. (Designa	ition)	Control Equipment	Control Equipment	HAP /	THE REAL PROPERTY.						Common Service	mitted			-					
		1700-89)		Code	Efficiency	CABIN	diber	Pr	roposed E	mission R	ates		N. Carrier and Car	ion Rate	Ad		Contin	uous	~			
		-]	2							\$)]	(Cu	irent)	Cha Delet		Compl	iance		centrat Exiting		
Pollutar	ıt					7. Q			Average	Ma	ximum	Ann	nual	An	nual ·	Uncha		Metl	nod		Mulig	at Blac	
Particula	ite matte	r (PM)							(lb/hr)	(11	os/hr)	(tons	s/yr)	(tor	ns/yr)								
Sulfur d	-	(1 14110)		-						_		-										gr/s	td ft ³
Nitroger																							by vol
Address of the latest of the l	monoxid	е								-						-				-		-	by vol
Total V	OC (inclu	iding thos	e listed be	low)	000	0%			46.41		1097	0.0	60			A						-	by vol
Lead				17						1		5.0											by vol
Chlorop	rene				000	0%	00126-	99-8	40	2	2527	0.5	52			A					-	STATE OF TAXABLE PARTY.	by vol
Toluene					000	. 0%	00108-	88-3	2.14		785	0.0)28			A	OR OTHER DESIGNATION OF THE PERSON NAMED IN						by vol
			· ·																			_	by vol

24. NSR Applicability Summary [LAC 33:III.504 and LAC 33:III.509] 🛛 N/A

This section consists of five tables. A-E, and is applicable only to new and existing major stationary sources (as defined in LAC 33:III.504 or in LAC 33:III.509) proposing to permit a physical change or change in the method of operation. It would also apply to existing minor stationary sources proposing a physical change or change in the method of operation where the change would be a major source in and of itself. Add rows to each table as necessary. Provide a written explanation of the information summarized in these tables. Consult instructions.

24.A. Project Summary

		Α	В	С	D	E	F
Emission Point ID	Description	New, Modified, Affected, or Unaffected*	Pre-Project Allowables (TPY)	Baseline Actual Emissions (over 24-month period)	Projected Actual Emissions (TPY)	Post-Project Potential to Emit (TPY)	Changė
PM _{2.5}	24-Month Period: MM/DD/	YYYY – MM/DD/YY	YYY				
				<u> </u>		PM _{2.5} Change:	
PM ₁₀	24-Month Period: MM/DD/	YYYY – MM/DD/Y	YYY				
			<u> </u>				
						PM ₁₀ Change:	
SO ₂	24-Month Period: MM/DD/	YYYY – MM/DD/Y	YYY				
		· · · · · · · · · · · · · · · · · · ·			<u> </u>	SO ₂ Change:	
NO _x	24-Month Period: MM/DD/	YYYY – MM/DD/YY	YYY				
				<u> </u>	<u> </u>	NO _X Change:	
СО	24-Month Period: MM/DD/	YYYY – MM/DD/YY	YYY			<u> </u>	
							· · ·
				·			

L			7.1		СО	Change:]
VOC	24-Month Period: MM/DD/	YYYY – MM/DD/YYY	ry				
					voc	Change:	
							
CO₂e	24-Month Period: MM/DD/	YYYY – MM/DD/YYY	Y				
	 						
	<u> </u>						
* Linaffected	emissions units are not required	to be listed individual!	lu. Bu shaasina aat	4- 1:		Change:	
24.A will n	emissions units are not required or be modified or experience an	increase in actual annu	iy. By choosing not lal emissions as part	of the proposed projec	sions units, the applicant assert	s that all emissions units	not listed in Tabl
	•	•	-				
	reditable Contemporaneou					······	
Contempor	aneous Period: MM/DD/YYYY	/ – MM/DD/YYYY				<u>.</u>	<u> </u>
		A	В	С	D	E	F
Emission Point ID		Date of Modification	Pre-Project Allowables (TPY)	Baseline Actual Emissions (over 24-month period)	24-Month Period	Post-Project Potential to Emit (TPY)	Change
PM _{2,5}							
						T	<u>. </u>
							
				· · · · · · · · · · · · · · · · · · ·		PM _{2.5} Change:	
PM ₁₀			······································				
		7.		T			
							
<u> </u>	<u></u>	<u> </u>				PM ₁₀ Change:	
SO ₂							
	1						
-		1 . 1		 		·	<u> </u>

..

. Creditable Conte	mporaneous Changes	
		SO ₂ Change:
NO _x		
1		 NO _x Change:
со		
		 CO Change:
voc		 ,
<u> </u>		 VOC Change:
CO ₂ e	· · · · · · · · · · · · · · · · · · ·	
		CO₂e Change:

24.C. BACT/LAER Summary

Emission Point ID	Pollutant	BACT/LAER	Limitation	Averaging Period	Description of Control Technology/Work Practice Standard(s)
	<u> </u>		·		

24.D. PSD Air Quality Analyses Summary

		A	В	С	D	E	F	\mathbf{G}	Н	I
Pollutant	Averaging Period	Preliminary Screening Concentration	Level of Significant Impact	Significant Monitoring Concentration	Background	Maximum Modeled Concentration	Modeled + Background Concentration	NAAQS	Modeled PSD Increment Consumption	Allowable Class II PSD Increment
		(μg/m³)	(μg/m³)	(μg/m³)	(μg/m³)	(μg/m³)	(μ <i>g/</i> m³)	$(\mu g/m^3)$	(μg/m³)	(μg/m³)
PM _{2.5}	24-hour		1.2	4		<u>-</u>		35	<u> </u>	
	Annual		0.3					15		
PM ₁₀	24-hour		5	10				150		30
	Annual		1	-				50		17
SO ₂	1-hour		7.8	-		- · · · · · · · · · · · · · · · · · · ·		195		-
	3-hour		25					1300		512
	24-hour		5	13				365		91
	Annual		1	-				80		20
NO _X	l-hour		7.5	-				188		
	Annual		1	14	-			100		25
со	1-hour		2000	-			<u> </u>	40,000	- -	-
<u> </u>	8-hour		500	575				10,000	-	
Lead	3-month		-	0.1	<u>}</u>			1.5	<u>.</u>	

	eview Offsets [LAC 33:III.517.D.16, LAC 33:III.504.D.4 & 5] N/A d project triggers Nonattainment New Source Review (NNSR). NOx DVOC
NO _X :	- " -
Is the applicant proposing to use internal	offsets? 🔲 Yes 🔲 No
If not, identify the source of the offsets.	Company: Facility/Unit:
	Permit No.:
Is an ERC Bank Application included wit ☐ Yes ☐ No	h this application, or has an application already been submitted to LDEQ?
If the ERC application has already been so	ubmitted, give the date:
Identify the emissions units from which the	ne offsets will be obtained (reference specific Emission Point ID numbers).
VOC:	
Is the applicant proposing to use internal of	offsets? \(\sigma\) Yes \(\sigma\) No
If not, identify the source of the offsets.	Company:
,	Facility/Unit:
	Permit No.:
Is an ERC Bank Application included wit	h this application, or has an application already been submitted to LDEQ?
If the ERC application has already been so	ubmitted, give the date:
Identify the emissions units from which th	ne offsets will be obtained (reference specific Emission Point ID numbers).
document should clearly differentiate bety	sure the ERC Bank Application is completed properly. In the case of NO _X , the ween ozone season and non-ozone season actual emissions during the baseline e to indicate if a portion of the reductions are no longer surplus (e.g., due to new of a netting analysis, etc.).
24 E. Conomio Impost	
24.F. Economic Impact Answer the following questions.	·
How many temporary jobs will be added	as a result of this project?
How many permanent jobs will be added	as a result of this project?

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24.G Notification of Federal Land Manager [LAC 33:III.504.E.1, LAC 33:III.509.P.1] Complete this section only if the proposed project triggers NNSR or PSD.

a. Is the proposed facility or modification located within 100 kilo	meters of a Cl	ass I Area? Yes No
If Yes, determination of Q/d is not required; skip to the next questi	on. If No, cor	nplete the Q/d equation below:
$Q/d = \frac{PM_{10 \text{ (NEI)}} + SO_{2 \text{ (NEI)}} + NO_{x \text{ (NEI)}} + H_2SO_{4 \text{ (NEI)}}}{Class \text{ I km}} \text{ where:}$	PM _{10 (NEI)} SO _{2 (NEI)} NO _{X (NEI)} H ₂ SO _{4 (NEI)} Class I km	= net emissions increase of PM ₁₀ ^{1,2} = net emissions increase of SO ₂ ^{1,2} = net emissions increase of NO _X ^{1,2} = net emissions increase of H ₂ SO ₄ ^{1,2} = distance to nearest Class I Area ³
Q/d = + + + +	— <u> </u>	
If Q/d < 10, proceed to Section 25. If Q/d ≥ 10, complete the rema	inder of this S	ection.
b. Has the applicant provided a copy of the application to the Fed	eral Land Mar	nager? Yes No
c. Does the application contain modeling that demonstrates no ad (AQRVs) in the Class I Area? Yes No	verse impact o	n Air Quality Related Values
d. If Yes, indicate the model used: VISCREEN PLUVUI	E II □ CAL	PUFF Cother:4
e. Has the Federal Land Manager concurred that the proposed pro Yes No If Yes, please attach correspondence.	ject will not a	dversely impact any AQRVs?
If the net emissions increase of any pollutant is negative, enter "0 If the project did not trigger a netting analysis, use the project inc pollutant's significance level. In kilometers.	rease. In this	case, the value will be less than the
⁴ Model must be approved by LDEQ and the Federal Land Manager	r	

25. Environmental Assessment Statement (EAS or "IT" Question Responses) [La. R.S. 30:2018] ☐ Yes ☒ No

** This section is required when applying for new Part 70 operating permits and/or major modifications. Any applications for these permit types that do not include answers to these questions will not be considered to be administratively complete. **

For new Part 70 operating permits and/or major modifications, answers to these questions must be provided by the applicant to the local governmental authority and the designated public library at no additional costs to these entities. Consult instructions to determine what is considered to be a "local governmental authority" and a "designated public library". Indicate the name and address of the local governmental authority and the designated public library to which the answers to these questions were sent:

Name of Local Governing Authority Street or P.O. Box			Name of Designated Public Library Street or P.O. Box				

Answer the following five questions on separate pages using full and complete answers. Include as many pages as necessary in order to provide full and complete answers. This information is required per Louisiana Revised Statutes 30:2018 (La. R.S. 30:2018).

Question 1: Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible? (This question requires the permittee to identify adverse environmental effects, both potential and real.)

Question 2: Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former? (This question requires the permittee to perform a cost-benefit analysis, or at least a quantitative indication of the economic benefits and a qualitative description of the negative impacts expected from the permittee's operation. The latter should come from the answer to Question 1.)

Question 3: Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits? (This question requires the permittee to demonstrate having considered alternate technologies.)

Question 4: Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits? (This is the question that deals directly with siting criteria.)

Question 5: Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits? (This question requires the permittee to demonstrate having considered the most stringent techniques for reducing or more efficiently handling waste.)

PART 70 OPERATING PERMIT APPLICATION COMPLETENESS CHECKLIST

Instructions: Complete this checklist and submit with the completed air permit application.

LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	NA	Location Within the Permit Application
517.A Timely Submittal	Was a Copy of the Application Also Submitted to EPA?	х			Under Separate Cover
517.B.1.2 Certification	Does the Application include a Certification by a Responsible Official?	Х			Item 10 Section 3
517.B.3 Certification	Does the Application Include Certification by a Professional Engineer or their Designee:	х			Item 10 Section 3
517.D.1 Identifying Information	Does the Application Include:				
	Company Name, Physical and Mailing Address of Facility?	Х			Items 1 & 2 Section 3
	2. Map showing Location of the Facility?	Х			Figure 1
	3. Owner and Operator Names and Agent?	Х			Item 1 Section 3
	4. Name and Telephone Number of Plant Manager or Contact?	x			Item 11 Section 3
517.D.2 SIC Codes, Source Categories	Does the Application Include a Description of the Source's Processes and Products?	х			Item 2 Section 3
	Does the Application Include the Source's SIC Code?	х			Item 5 Section 3
	Does the Application Include EPA Source Category of HAPs if applicable?	х			Section 3
517.D.3,6 EIQ Sheets	Has an EIQ Sheet been Completed for each Emission Point whether an Area or Point Source?	х			Item 23 Section 3
517.D.4 Monitoring Devices	Does the Application Include Identification and Description of Compliance Monitoring Devices or Activities?	х			Item 22 Section 3
517.D.5 Revisions and Modifications Only	For Revisions or Modifications, Does the Application include a Description of the Proposed Change and any Resulting Change in Emissions?	X			Section 1 & Item 1, Section 3
517.D.7 General Information	Does the Application Include Information Regarding Fuels, Fuel Use, Raw Materials, Production Rates, and Operating Schedules as necessary to substantiate emission rates?	х			Item 23 Section 3
517 D.8 Operating Limitations	Has Information Regarding any Limitations on Source Operation or any Applicable Work Practice Standards been Identified?	х			Item 22 Section 3
517.D.9 Calculations	Are Emission Calculations Provided?	х			Appendix A

LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	NA	Location Within the Permit Application
517.D.10 Regulatory Review	Does the Application Include a Citation and Description of Applicable Louisiana and Federal Air Quality Requirements and Standards?	Х	<u> </u> 	 	Item 22 Section 3
517.D.11 Test Methods	Has a Description of or a Reference to Applicable Test Methods Used to Determine Compliance with Standards been Provided?	Х			Item 22 Section 3
517.D.12 Major Sources of TAPs	Does the Application include Information Regarding the Compliance History of Sources Owned or Operated by the Applicant (per LAC 33.III.5111)?	X			Item 14a Section 3
517.D.13 Major Sources of TAPs	Does the Application include a Demonstration to show that the Source Meets all Applicable MACT and Ambient Air Standard Requirements?	Х	_ 		Section 2
517.D.14 PSD Sources Only	If Required by DEQ, Does the Application Include Information Regarding the Ambient Air Impact for Criteria Pollutants as Required for the Source Impact Analysis per LAC 33:III.509.K, L, and M?			х	
517 D.15 PSD Sources Only	If Required by DEQ, Does the Application Include a Detailed Ambient Air Analysis?	ļ.		Х	
517.D.16, 18	Has any Additional Information been Provided?		х		
517.D.17 Fees	Has the Fee Code been Identified?	Х			Item 5 Section 2
	Is the Applicable Fee Included with the Application?			X	_
517.E.1 Additional Part 70 Requirements	Does the Certification Statement Include a Description of the Compliance Status of Each Emission Point in the Source with All Applicable Requirements?	х			Item 10 Section 3
517E.2 Additional Part 70 Requirements	Does the Certification Statement Include a Statement that the Source will continue to Comply with All Applicable Requirements with which the Source is in Compliance?	х			Item 10 Section 3
517.E.3 Additional Part 70 Requirements	Does the Certification Statement Include a Statement that the Source will, on a timely basis, meet All Applicable Requirements that will Become Effective During the Permit Term?	х			Item 10 Section 3
517.E.4 Additional Part 70 Requirements	Are there Applicable Requirements for which the Source is not in Compliance at the Time of Submittal?		Х		
	Does the Application include a Compliance Plan Schedule?		_	x	
	Does the Schedule Include Milestone Dates for which Significant Actions will occur?			х	
	Does the Schedule Include Submittal Dates for Certified Progress Reports?			Х	

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LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	NA	Location Within the Permit Application
517.E.5 Additional Part 70 Requirements Acid Rain	Is this Source Covered by the Federal Acid Rain Program?		х		
	Are the Requirements of LAC 33.III.517.E 1-4 included in the Acid Rain Portion of the Compliance Plan?			х	
517.E.6 Additional Part 70 Requirements	Have any Exemptions from any Applicable Requirements been Requested?		X		
	Is the List and explanations Provided?			Х	
517.E.7 Additional Part 70 Requirements	Does the Application Include a Request for a Permit Shield?		X		
	Does the Request List those Federally Applicable Requirements for which the Shield is Requested along with the Corresponding Draft Permit Terms and conditions which are Proposed to Maintain Compliance?			Х	
517.E.8 Additional Part 70 Requirements	Does the Application Identify and Reasonably Anticipated Alternative Operating Scenarios?		Х		
<u></u>	Does the Application include Sufficient Information to Develop permit Terms and Conditions for Each Scenario, Including Source Process and Emissions Data?			x	
517.F Confidentiality	Does the Application Include a Request for Non-Disclosure (Confidentiality)?		Х		
525.B. Minor Permit Modifications	Does the Application Include a Listing of New Requirements Resulting for the Change?		Х		
	Does the Application Include Certification by the Responsible Official that the Proposed Action Fits the Definition of a Minor Modification as per LAC 33:III.525.A.		х		
	Does the Certification also Request that Minor Modification Procedures be Used?		Х		
	Does the Application, for Part 70 Sources, Include the Owner's Suggested Draft Permit and Completed Forms for the Permitting Authority to Use to Notify Affected States?		Х		
La. R.S. 30:2018 – PSD/NNSR only	Has a copy of the answers to the questions posed in the Environmental Assessment Statement (Section 25) been sent to the local governing authority at no cost to the local governing authority?			х	
	Has a copy of the answers to the questions posed in the Environmental Assessment Statement (Section 25) been sent to the designated public library at no cost to the designated public library?			Х	

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FIGURES

FIGURE 1 SITE LOCATION MAP

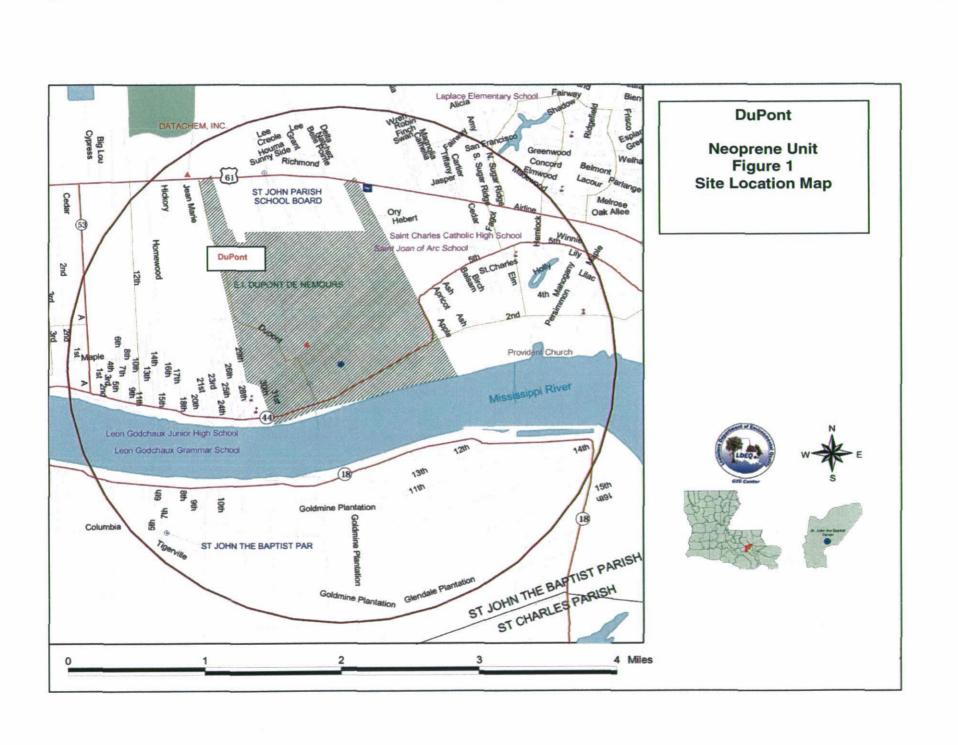
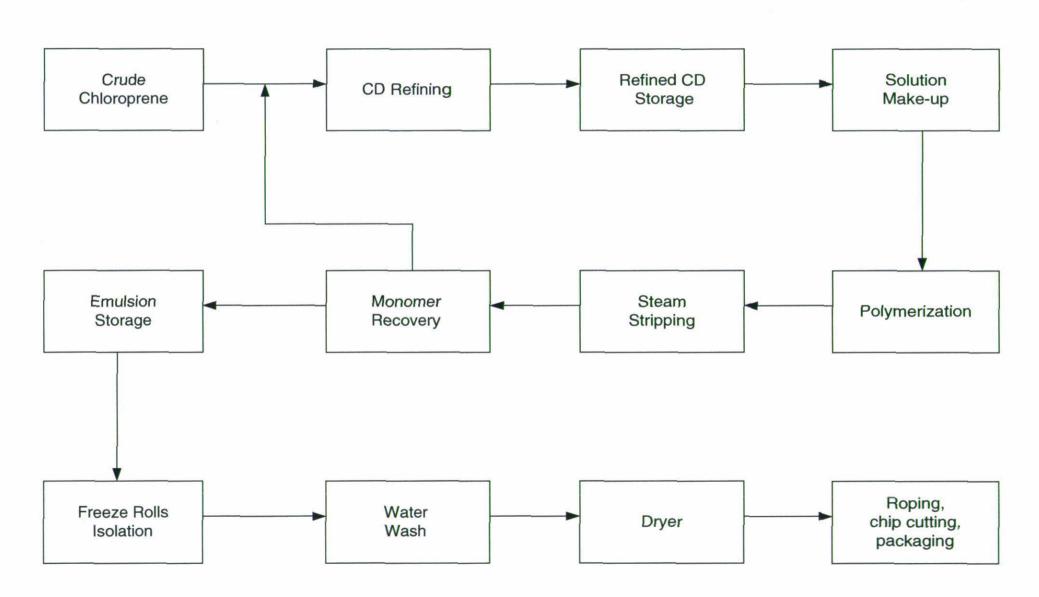
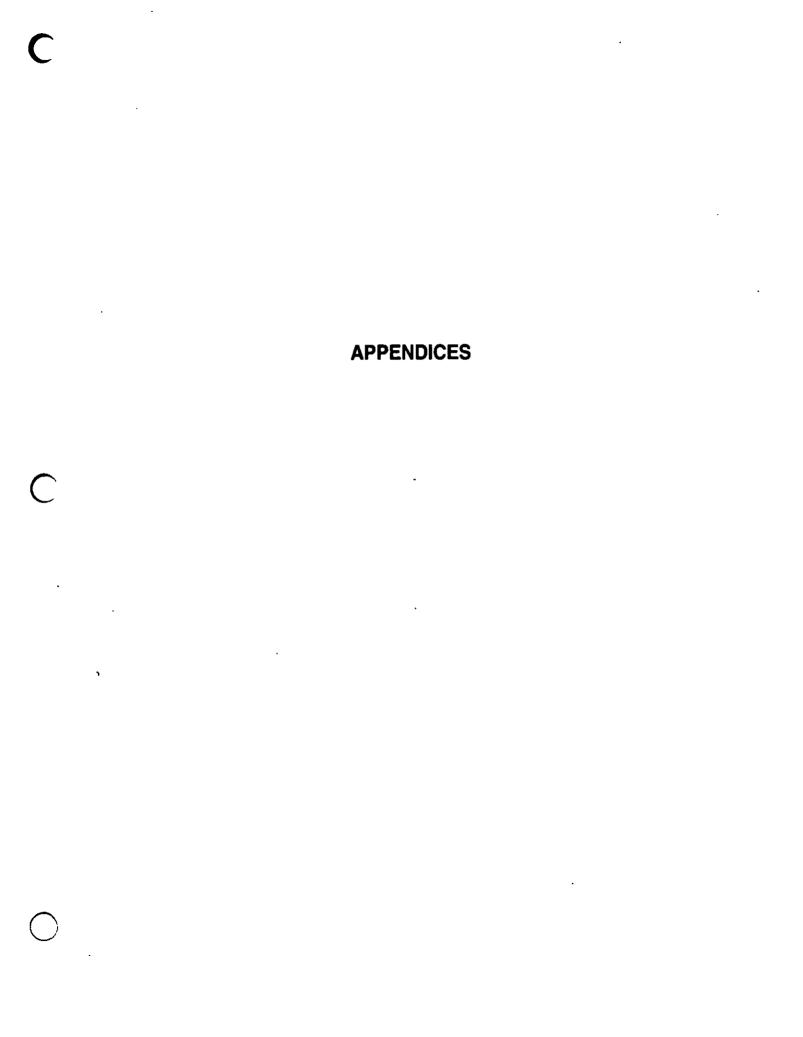


FIGURE 2 NEOPRENE UNIT PROCESS FLOW DIAGRAM

FIGURE 2
NEOPRENE UNIT PROCESS FLOW DIAGRAM





APPENDIX A AIR EMISSION CALCULATIONS



Air Emissions Calculation Sheet

RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT-PONTCHARTRAIN SITE

Source Description: No. 7 & 8 ESTs' Manway and EST 13 & 14 Strainer Exhaust Blower

TEMPO ID: EQT0134

Point Source ID No.: 1700-1

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Basis:

The unstripped emulsion tank is vented down to atmospheric pressure and the nitrogen blanket which enters the top of the tank is turned off before opening the manway.

Emissions from the open manway and the agitator shaft seals are captured by the shaft seal ventilation system.

Emissions are based on spot sampling data conducted in September-October 2002 which showed an average chloroprene (CD) concentration of 16.3 ppm with a maximum concentration of 47 ppm.

The maximum concentration is estimated to be 10% greater than the maximum measured concentration.

Toluene and other VOC emissions are estimated using the fraction of saturation of CD. Conservatively assume ACR is still present in the material.

Based on field observation and engineering judgement, emissions from EST 13 & 14 drop strainer are insignificant.

Calculation basis provided by Mr. P. Offut, DuPont

Rated Capacity of Blower =

2500 cfm

Amount of Time Discharging =

8760 hours/yr

Average CD in Air Exhausted =

16.3 ppm CD by volume

Maximum CD in Air Exhausted =

51.7 ppm CD by volume

Molecular Weight of CD =

88.54 lb/lb-mole

Molecular Weight of Toluene =

92.14 lb/lb-mole

Molecular Weight of ACR =

122.99 lb/lb-mole

Temperature =

25 °C

Pressure =

14.696 psia

Average Emission Rates

Chloroprene

Using given information,

Average CD Emissions =

0.0408 cfm CD



Air Emissions Calculation Sheet

RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT-PONTCHARTRAIN SITE

Source Description: No. 7 & 8 ESTs' Manway and EST 13 & 14 Strainer Exhaust Blower

TEMPO ID: EQT0134

Point Source ID No.: 1700-1

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Using the Ideal Gas Law,

Average CD Emissions =

Average CD Emissions =

Average CD Emissions =

Average CD Emissions = Average CD Emissions = 0.009221 lbs CD/minute 0.553 lbs CD/hour 4847 lbs/yr

2.42 tons/yr

0.000104 moles CD/minute

Toluene

Using the Ideal Gas Law,

V.P. of CD at Saturation =

189.00 mm Hg

Total Vapor =

0.002550 moles/ft3

Mole Fraction CD = 0.001633333 %

CD Vapor =

0.00000004 moles/ft3

CD Partial Pressure =

0.012 mm Hg

Ratio =

0.000066

V.P. of Toluene at Saturation =

28.40 mm Ha

Toluene Partial Pressure =

0.0019 mm Hg

Toluene Vapor = 0.000000006 moles/ft3

Toluene Vapor =

0.00002 moles/min

Toluene Vapor =

0.001 lb/min

Toluene Vapor =

0.09 lb/hr

Toluene Vapor =

0.38 tpy

ACR

Ratio =

0.000066

V.P. of ACR at Saturation =

42.28 mm Hg

ACR Partial Pressure =

0.0028 mm Hg

ACR Vapor =

0.00000001 moles/ft3

ACR Vapor =

0.00002 moles/min

ACR Vapor =

0.0029 lb/min

ACR Vapor =

0.17 lb/hr

ACR Vapor =

0.75 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT-PONTCHARTRAIN SITE

Source Description: No. 7 & 8 ESTs' Manway and EST 13 & 14 Strainer Exhaust Blower

TEMPO ID: EQT0134

Point Source ID No.: 1700-1

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Maximum Emission Rates

Chloroprene

Using given information,

Maximum CD Emissions =

0.1293 cfm CD

Using the Ideal Gas Law,

Maximum CD Emissions = Maximum CD Emissions = Maximum CD Emissions = 0.000330 moles CD/minute 0.029187 lbs CD/minute 1.751 lbs CD/hour

Toluene

Using the Ideal Gas Law,

V.P. of CD at Saturation =

189.00 mm Hg

Total Vapor =

0.002550 moles/ft3

Mole Fraction CD =

0.00517 %

CD Vapor =

0.00000013 moles/ft3

CD Partial Pressure =

0.039 mm Hg

Ratio =

0.000208

V.P. of Toluene at Saturation =

28.40 mm Hg

Toluene Partial Pressure =

0.0059 mm Hg

Toluene Vapor = Toluene Vapor = 0.00000002 moles/ft3

0.00005 moles/min

Toluene Vapor =

0.0046 lb/min

Toluene Vapor =

0.27 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT-PONTCHARTRAIN SITE

Source Description: No. 7 & 8 ESTs' Manway and EST 13 & 14 Strainer Exhaust Blower

TEMPO ID: EQT0134

Point Source ID No.: 1700-1

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ACR

Ratio = 0.000208

V.P. of ACR at Saturation = 42.28 mm Hg ACR Partial Pressure = 0.0088 mm Hg

ACR Vapor = 0.00000003 moles/ft3
ACR Vapor = 0.00007 moles/min

ACR Vapor = 0.0091 lb/min ACR Vapor = 0.54 lb/hr

Summary

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	7110	0.812	2.569	3.555
Chloroprene	4847	0.553	1.751	2.423
Toluene	758	0.087	0.274	0.379
Total HAPs	5605	0.640	2.025	2.802
Total TAPs	5605	0.640	2.025	2.802



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Strippers Condenser Vent

TEMPO ID: RLP0014

Point Source ID No.: 1700-2 Page 1 of

Basis:

Vapors from all three strippers pass through a vacuum pump to a single vent condenser cooled with -20 deg C brine.

Nitrogen flow is based on sampling data conducted by METCO on March 13, 2002 and March 19, 2002.

Toluene emissions are estimated using the partial pressure of toluene produced in the unstripped emulsion.

Ammonia is added to the inlet of the condenser as an antifreeze and is emitted.

Calculation basis provided by Mr. P. Offut, DuPont

1,2-Dichlorobenzene emissions are based on a mass balance.

Condenser Feed Temperature = 2 C

Condenser Exit Temperature = -14 C

Vapor Pressure of CD = 27.094 mm Hg @ -14 C

Vapor Pressure of Toluene = 2.566 mm Hg @ -14 C

Vapor Pressure of Toluene = 42.427 mm Hg @ 30 C

Vapor Pressure of ACR = 5.203 mm Hg @ -14 C

Vapor Pressure of ACR = 60.824 mm Hg @ 30 C

Molecular Weight of Toluene = 92.14 lb/lb-mole

Max. Mole Fraction Toluene = 0.00398

Molecular Weight of ACR = 122.99 lb/lb-mole

Max. Mole Fraction ACR = 0.000970

Operating Hours = 8760 hr

N2 flow = 0.41250 lb/min N2 @ 760 mm Hg and 20 C

Average Emission Rates

Chloroprene

Total vapor = 0.002934 moles/ft3

CD vapor = 0.000105 moles/ft3 3.57 mole % CD

CD vapor = 0.009261 lbs CD/ft3 total vapor

Density of N2 = 0.08270 lb/ft3 760 mmHg & -14 deg C

N2 flow = 4.99 ft3/min for 3 strippers

Total flow = 5.20 ft3/min for 3 strippers

CD Vapor flow = 0.19 ft3/min



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Strippers Condenser Vent

TEMPO ID: RLP0014

Point Source ID No.: 1700-2 Page 2 of 6

CD Vapor flow = 0.0482 lbs/min
CD Vapor flow = 2.89 lbs/hr
CD Vapor flow = 25309 lbs/yr

Toluene

Determine toluene content of feed to stripper condenser

Total vapor = 0.002764 moles/ft3

Liquid Mole Fraction Toluene = 0.003977 0.40 mole % toluene

Partial Pressure Toluene = 0.169 mm Hg

Toluene Vapor = 0.00000061 moles/ft3 0.0222 mole % toluene

Toluene Vapor flow = 0.0012 ft3/min

Total flow = 5.20 ft3/min

Total flow = 5.20 ft3/min

Toluene Vapor = 0.000003 moles/min

Toluene Vapor = 0.000294 lb/min

Determine toluene saturation at condenser exit conditions

Toluene Vapor = 0.000010 moles/ft3
Toluene Vapor = 0.000052 moles/min
Toluene Vapor = 0.004746 lb/min

Toluene enters the stripper below saturation conditions at the exit of the stripper. Assume that no toluene is removed.

Toluene Vapor = 0.000294 lb/min
Toluene Vapor = 0.02 lb/hr
Toluene Vapor = 154 lb/yr
Toluene Vapor = 0.08 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Strippers Condenser Vent

TEMPO ID: RLP0014

Point Source ID No.: 1700-2

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ACR

Determine ACR content of feed to stripper condenser

Total vapor =

0.002764 moles/ft3

Liquid Mole Fraction ACR =

0.000970

0.10 mole % ACR

Partial Pressure ACR =

0.0590 mm Hg 0.00000021 moles/ft3

0.0078 mole % ACR

ACR Vapor = ACR Vapor flow =

0.00040 ft3/min

Total flow ≈ ACR Vapor =

5.20 ft3/min 0.000001 moles/min

ACR Vapor =

0.000137 lb/min

Determine ACR saturation at condenser exit conditions

ACR Vapor =

0.000020 moles/ft3

ACR Vapor ≈

0.000104 moles/min

ACR Vapor =

0.012845 lb/min

ACR enters the stripper below saturation conditions at the exit of the stripper. Assume that no ACR is removed.

ACR Vapor =

0.000137 lb/min

ACR Vapor ≈

0.01 lb/hr

ACR Vapor ≈

72 lb/yr

ACR Vapor ≈

0.04 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Strippers Condenser Vent

TEMPO ID: RLP0014

Point Source ID No.: 1700-2

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Ammonia

Based on Standard Operating Conditions,

Min NH3 addition per Stripper =

0 lb/hr

Max NH3 addition per Stripper =

1.5 lb/hr

Typically ammonia runs at

0.2 lb/hr

Ammonia has single addition point on vacuum pump discharge

NH₃ Addition to vacuum pump =

5256 lb/yr

Max NH₃ Addition =

39420 lb/yr

at top of SOC

Mean NH₃ emissions assumed 2 x of typical addition

10512 lb/yr

NH₃ Emissions =

10512 lbs/yr

NH₃ Emissions ≈

1.20 lbs/hr

NH₃ Emissions =

5.256 tpy

Maximum Emission Rates

Maximum emission rates are conservatively assumed to be 1.5 times the average emission rates.

Summary

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	25535	2.915	4.372	12.768
Chloroprene	25309	2.889	4.334	12.654
1,2-Dichlrobenzer	0.01	0.000001	0.000002	0.000005
Toluene	154	0.018	0.026	0.077
Ammonia	10512	1.200	1.800	5.256
Total HAPs	25463	2.907	4.360	12.732
Total TAPs	35975	4.107	6.160	17.988



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles Vent Condenser

TEMPO ID: RLP0015

Point Source ID No.: 1700-3 Page 1 of 11

Basis:

Vapors from all 5 PK pass to a single vent condenser cooled by 2 deg C brine.

Assume all of the nitrogen flowing through the vent condenser will saturate with CD.

Assume vapors inlet and exit vent condenser are saturated with water

CD condensation in the condenser starts at about 6% CD in the inlet stream

Toluene emissions are based on sampling data on March 14, 2002 and March 18, 2002 by METCO Environmental.

On March 14, 2002 type AD was being produced, which includes toluene.

On March 18, 2002 type WHV was being produced which does not inloude toluene.

The average toluene emission rate measured was 0.2033 lb/hr for a product using a toluene-based stabilizer.

The highest toluene emission rate measured was 0.34 lb/hr for a product using a toluene-based stabilizer.

The average toluene emission rate measured was 0.0033 lb/hr for a product not using a toluene-based stabilizer.

The highest toluene emission rate measured was 0.0054 lb/hr for a product not using a toluene-based stabilizer.

Stabilizer, defoamer, Octopol and Dresinsate are added with the vent closed - insignificant emissions 1,2-Dichlorobenzene emissions are based on a mass balance.

Emulsification Temperature = 35 C Condenser Exit Temperature = 6 C

Worst case charge size = 41708 lb/charge

Worst Case Product Total Charges = 6743 charges/yr

ACR Type Charges = 6743 charges/yr

Toluene Stabilizer Charges = 6557 charges/yr Maximum Other Type Charges = 6381 charges/yr

Spec. Grav. Unstripped Emulsion = 1.060

Venting Time for Emulsification = 31.6 min/charge

Average Toluene Emissions = 0.2033 lb/hr with toluene-based stabilizer

Maximum Toluene Emissions = 0.3400 lb/hr with toluene-based stabilizer

Average Toluene Emissions = 0.0033 lb/hr without toluene-based stabilizer

Maximum Toluene Emissions = 0.0054 lb/hr without toluene-based stabilizer



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles Vent Condenser

TEMPO ID: RLP0015

Point Source ID No.: 1700-3 Page 2 of 11

Emission Rates

Emulsification

Determine the VOC's inlet the vent condenser to be piped to the new condensing system CD exit LPK =

1.5 % at start of emulsification

4.8 % 10 min after start of emulsification

6.8 % 15 min after start of emulsification

15.4 % 20 min after start of emulsification

26 % 31.6 min after start of emulsification

Charge Volume = 631 ft3/charge
Nitrogen Purge Rate = 158 ft3/charge
Avg. Displacement Charging Rate = 19.95 ft3/min

CD Displacement Rate = 0.30 ft3/min @ start of emulsification

CD Displacement Rate = 0.96 ft3/min @ 8.54 min after start of emulsification
CD Displacement Rate = 1.36 ft3/min @ 12.82 min after start of emulsification
CD Displacement Rate = 3.07 ft3/min @ 17.09 min after start of emulsification
CD Displacement Rate = 5.19 ft3/min @ 27 min after start of emulsification

nitrogen purge is off during emulsification

Average Displacement Rate = 19.95 ft3/min

% CD = 1.50 % @ start of emulsification

% CD = 4.80 % @ start of emulsification + 8.54 min % CD = 6.80 % @ start of emulsification + 12.82 min % CD = 15.40 % @ start of emulsification + 17.09 min % CD = 26.00 % @ start of emulsification + 27 min

Worst case of nitrogen saturated with CD and H2O at 35 C inlet condenser

Vapor Pressure of CD = 334.34 mm HgVapor Pressure of H2O = 43.57 mm Hg

Total Vapor = 0.002468 moles/ft3

CD Vapor = 0.001086 moles/ft3 43.99 mole % CD

CD Vapor = 0.096122 lbs CD/ft3 total vapor

H2O Vapor = 0.000141 moles/ft3 5.73 mole % H2O

H2O Vapor = 0.002547 lbs H2O/ft3 total vapor

N2 Vapor = 0.001241 moles/ft3 50.28 mole % N2

N2 Vapor = 0.034739 lbs N2/ft3 total vapor



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles Vent Condenser

TEMPO ID: RLP0015

Point Source ID No.: 1700-3 Page 3 of 11

At saturation exit condenser

6 C Temperature =

0.002724 moles/ft3 Total Vapor = CD Vapor Pressure = 104.34 mm Hg

> CD Vapor = 0.00037399 moles/ft3 13.73 mole % CD

0.03311293 lbs CD/ft3 total vapor CD Vapor =

H2O Vapor Pressure = 7.36 mm Hq

> H2O Vapor = 0.00002637 moles/ft3 0.97 mole % H2O

0.00047470 lbs H2O/ft3 total vapor H2O Vapor =

85.30 male % N2 N2 Vapor = 0.00232362 moles/ft3

0.06506138 lbs N2/ft3 total vapor N2 Vapor =

N2 Flow =16.77 ft3/min @ start of emulsification

16.17 ft3/min @ 8.54 min after start of emulsification N2 Flow = N2 Flow =15.81 ft3/min @ 12.82 min after start of emulsification N2 Flow =14.26 ft3/min @ 17.09 min after start of emulsification N2 Flow =12.34 ft3/min @ 27 min after start of emulsification

Total Flow = 18.08 ft3/min @ start of emulsification

Total Flow = 17.16 ft3/min @ 8.54 min after start of emulsification Total Flow = 18.08 ft3/min @ 12.82 min after start of emulsification 17.70 ft3/min @ 17.09 min after start of emulsification Total Flow = Total Flow = 15.32 ft3/min @ 27 min after start of emulsification

0.0654 lb/min @ start of emulsification CD Flow =

CD Flow = 0.1987 lb/min @ 8.54 min after start of emulsification 0.2965 lb/min @ 12.82 min after start of emulsification CD Flow = CD Flow = 0.5862 lb/min @ 17.09 min after start of emulsification CD Flow = 0.5074 lb/min @ 27 min after start of emulsification

Straight line fit points and obtain area under curve

For first 8.54 min CD = 1.1283 lbs For 8.54 to 12.82 min CD = 1.0577 lbs For 12.82 to 17.09 min CD = 1.8855 lbs 5.4195 lbs For 17.09 to 27 min CD = Total CD per Charge = 9.4910 lbs Total CD per Year = 64002 lbs/yr Total CD per Year = 32.00 tons/yr



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During emulsification, toluene emissions are quite low, per sampling much less than saturation at 2 C.

Conservatively assume toluene emissions are the same as measured by METCO even with the the larger, more efficient 2 C condenser.

Assume that toluene-based stabilizer types emit the same toluene as A-types (even though A-type stabilizer toluene is 2 times G-types).

A and G-type Maximum Toluene = 0.3400 lbs/hr Other Type Maximum Toluene = 0.0054 lbs/hr Average A and G-type Toluene = 0.2033 lbs/hr Average Other Type Toluene = 0.0033 lbs/hr Average A and G-type Toluene = 600 lbs/vr Average Other Type Toluene = 9 lbs/yr Total Toluene = 609 lbs/yr Total Average Toluene = 0.2065 lbs/hr

A similar DuPont facility in Louisville reported 0.054 lb/charge of ACR emissions for the types Pontchartrain will be making.

Conservatively assume ACR emissions are the same as the Louisville facility even with a larger, more efficient 2 C condenser.

ACR per Charge = 0.054 lbs/charge

Maximum ACR Emissions = 0.120 lbs/hr

Annual ACR Emissions = 364 lbs/yr

Average ACR Emissions = 0.120 lbs/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

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Decompress Sampling

After stabilization, W types are cooled to 25 C, G-Types cooled to 33 C (GW to 30 C) and A-types are about 20 C.

After stabilization, the PK is vented for sampling through the sample port.

Once in a while, floating coag will be seen at this time and the manhole must be opened for skimming after stabilization.

Venting down occurs when the vast majority of the CD is converted to polymer and entrapped in the polymer, and after cool down of W types, so CD concentration in the vapor will be much less than during charging.

Although it is almost completely reacted in the process, assume ACR is still present.

Assume worst case of nitrogen saturated with CD, toluene, ACR and H2O and the Slocum vapor pressure for CD used in EST calculations.

25 C Temperature = Vapor Pressure of CD = 189 mm Hg 28.40 mm Hg Vapor Pressure of Toluene = 42.28 mm Hg Vapor Pressure of ACR = Vapor Pressure of H2O = 23.6 mm Hg 0.002550 moles/ft3 Total Vapor = 24.87 mole % CD 0.000634 moles/ft3 CD Vapor = 0.056158 lbs CD/ft3 total vapor at saturation CD Vapor = 3.74 mole % toluene 0.000095 moles/ft3 Toluene Vapor = 0.008782 lbs toluene/ft3 total vapor at saturation Toluene Vapor = 5.56 mole % ACR 0.000142 moles/ft3 ACR Vapor = 0.017450 lbs ACR/ft3 total vapor at saturation ACR Vapor = 3.11 mole % H2O 0.000079 moles/ft3 H2O Vapor = 0.001426 lbs H2O/ft3 total vapor at saturation H2O Vapor = 62.73 mole % H2O 0.001600 moles/ft3 Nitrogen Vapor = 0.053274 lbs N2/ft3 total vapor at saturation Nitrogen Vapor =

Assume after the vent down occurs, 5 cfm nitrogen purge channels to vent and carries very little CD with it.



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles Vent Condenser

TEMPO ID: RLP0015

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Total Volume of LPK = 825 ft3 Vapor Volume of LPK = 194 ft3 when fully charged Amount of Vapor Decompression = 13.23 ft3 exit the vent CD in Vapor Decompressed = 3.29 ft3 exit the vent CD in Vapor Decompressed = 0.18 lbs/charge exit the vent CD in Vapor Decompressed = 1246 lbs/yr exit the vent Toluene in Vapor Decompressed = 0.49 ft3 exit the vent Toluene in Vapor Decompressed = 0.0043 lbs/charge exit the vent Toluene in Vapor Decompressed = 29.28 lbs/yr exit the vent ACR in Vapor Decompressed = 0.74 ft3 exit the vent ACR in Vapor Decompressed = 0.01 lbs/charge exit the vent ACR in Vapor Decompressed = 86.60 lbs/yr exit the vent N2 in Vapor Decompressed = 8.30 ft3 exit the vent H2O in Vapor Decompressed = 0.41 ft3 exit the vent 0.5 N2 Purge = 0.00 ft3/min exit the vent Venting Time = 1 min Total N2 Flow = 8.30 ft3/min exit the vent Total Venting Rate = 13.23 ft3/min exit the vent % CD of Total Venting Rate = 24.87 % CD exit the vent % Toluene of Total Venting Rate = 3.74 % toluene exit the vent % ACR of Total Venting Rate = 5.56 % ACR exit the vent Venting Temperature = 25 C exit the vent



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Source Description: Poly Kettles Vent Condenser

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The PK emissions are directed to the vent condenser.

Using the same assumptions as for final emulsification venting calculations for initial vent down after stabilization.

> 6 C Temperature =

0.002724 moles/ft3 Total Vapor =

CD Vapor Pressure = 104.34 mm Ha

> 13.73 mole % CD CD Vapor = 0.00037399 moles/ft3

CD Vapor = 0.03311293 lbs CD/ft3 total vapor

Toluene Vapor Pressure = 9.77 mm Hg

> 0.000035 moles/ft3 Toluene Vapor = 1.29 mole % toluene

Toluene Vapor = 0.003226 lbs toluene/ft3 total vapor

ACR Vapor Pressure = 16.39 mm Ha

> 2.16 mole % ACR ACR Vapor = 0.000059 moles/ft3

ACR Vapor = 0.007226 lbs ACR/ft3 total vapor

H2O Vapor Pressure = 7.36 mm Hg

> 0.97 mole % H2O H2O Vapor = 0.00002637 moles/ft3

0.00233502 lbs H2O/ft3 total vapor H2O Vapor =

N2 Flow = 8.30 ft3/min

% N2 of Total Flow = 85.30 %

Total Venting Rate = 9.73 ft3/min

1.3357 ft3/min CD Venting Rate =

CD Venting Rate = 0.3222 lb/min

0.3222 lbs/charge CD Venting Rate =

CD Venting Rate = 2172 lbs/yr

Toluene Venting Rate = 0.1251 ft3/min

Toluene Venting Rate = 0.0314 lb/min

Toluene Venting Rate = 0.0314 lbs/charge

Toluene Venting Rate = 212 lbs/vr

0.2098 ft3/min ACR Venting Rate =

ACR Venting Rate = 0.0703 lb/min

0.0703 lbs/charge ACR Venting Rate =

ACR Venting Rate = 474 lbs/yr

H2O Flow = 0.0942 ft3/min

H2O Flow = 0.1992 lb/min

0.1992 lbs/charge H2O Flow =

1343 lbs/yr H2O Flow =



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles Vent Condenser

TEMPO ID: RLP0015

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Vent Open Sampling

In sample mode, the vent valve is opened, and the nitrogen purge closed off This period is for 1 minute; there will be some low concentration CD flows to the vent condenser for 1 minute.

This essentially repeats the emission for Decompress Sampling

Decompress for Wash

After dropping the charge and displacing with 0.5 psig N2, the PK is vented down for water washing through the manway.

Normally, the manway with sight glass does not need to be opened to inspect the LPK is empty after dropping. However, once in a while the manhole must be opened to clean out popcom or coag.

For these cases use data from decompress sampling for initial CD concentration early in the charging sequence (2% by volume) and assume that the venting occurs quickly It is assumed that toluene and ACR concentrations are proportional to the CD concentration. Assume after the vent down occurs, nitrogen purge channels to vent and carries very little CD with it.

Venting Temperature =	25 C	
Total Volume of LPK =	825 ft3	
Amount of Vapor Decompression =	28 ft3 exi	t the vent
Total Vapor =	0.002550 moles/ft3	
CD Vapor =	0.000051 moles/ft3	2.00 mole % CD
CD Vapor =	0.004516 lbs CD/ft3 total vap	or
Toluene Vapor =	0.000008 moles/ft3	0.30 mole % toluene
Toluene Vapor =	0.000706 lbs toluene/ft3 total	
ACR Vapor =	0.000011 moles/ft3	0.45 mole % ACR
ACR Vapor =	0.001403 lbs ACR/ft3 total va	por
CD in Vapor Decompressed =		the vent
CD in Vapor Decompressed =	0.127 lbs/charge exi	the vent
CD in Vapor Decompressed =	855 lbs/yr exi	the vent
Toluene in Vapor Decompressed =	0.084 ft3 exi	the vent
Toluene in Vapor Decompressed =	0.020 lbs/charge exit	the vent
Toluene in Vapor Decompressed =	134 lbs/yr exit	the vent
ACR in Vapor Decompressed =	0.126 ft3 exit	the vent
ACR in Vapor Decompressed =	0.039 lbs/charge exit	the vent
ACR in Vapor Decompressed =	266 lbs/yr exit	the vent
N2 in Vapor Decompressed =	27.51 ft3 exit	the vent



RTP Environmental Associates, Inc. Kenner. Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles Vent Condenser

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5.00 ft3/min exit the vent 0.5 psig N2 Purge = Venting Time = 1 min Total N2 Flow = 32.51 ft3/min exit the vent 33.07 ft3/min exit the vent Total Venting Rate = exit the vent % CD of Total Venting Rate = 1.70 % CD exit the vent % Toluene of Total Venting Rate = 0.26 % toluene exit the vent % ACR of Total Venting Rate = 0.38 % ACR exit the vent Venting Temperature = 25 C

The PK emissions are directed to the vent condenser.

Make the same assumptions as for final emulsification venting calculations.

Since nitrogen is much less than saturation at exit condenser conditions, condenser inlet and exit CD, toluene and ACR concentrations are essentially the same.

33.07 ft3/min Total Venting Rate = CD Venting Rate = 0.561377 ft3/min 0.135394 lbs/min CD Venting Rate = 0.14 lbs/charge CD Venting Rate = 913 lbs/yr CD Venting Rate = 0.084360 ft3/min Toluene Venting Rate = 0.021173 lbs/min Toluene Venting Rate = 0.02 lbs/charge Toluene Venting Rate = Toluene Venting Rate = 143 lbs/yr 0.125573 ft3/min ACR Venting Rate = ACR Venting Rate = 0.042070 lbs/min 0.04 lbs/charge ACR Venting Rate = ACR Venting Rate = 284 lbs/yr

Vent Open for Wash

For PK wash, PK is empty and filled with nitrogen; vent valve is open, but nitrogen purge is off. There is a very low flow of vaporwith some low CD concentration to condenser for 10 minutes. chimney effect will draw air in through manway and out the vent, located nearby. There is no depressurization, so flow is deminimus and can be neglected.



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles Vent Condenser

TEMPO ID: RLP0015

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Decompress to Emulsify

Before allowing emulsification to begin (vent valve to open), 0.3 psig must be detected in the LPK. A vent down from 0.3 to 0 psig occurs at the start of emulsification.

For this case use data from decompress sampling for initial CD concentration early in the charging sequence inlet the vent condenser (2% by volume) since the venting occurs quickly. It is assumed that toluene and ACR concentrations are proportional to the CD concentration.

ł		
Venting Temperature =	25 C	, ,
Total Volume of LPK ≃	825 ft3	3
Amount of Vapor Decompression =	16.84 ft3	3 exit the vent
Total vapor =	0.002550 m	noles/ft3
CD Vapor =	0.000051 m	noles/ft3 2.00 mole % CD
CD Vapor =	0.004516 lbs	s CD/ft3 total vapor
Toluene Vapor =	0.000008 m	
Toluene Vapor =	0.000706 lbs	s toluene/ft3 total vapor
ACR Vapor =	0.000011 m	•
ACR Vapor =	0.001403 lbs	s ACR/ft3 total vapor
CD in Vapor Decompressed =	0.337 ft3	
CD in Vapor Decompressed =	0.076 ibs	s/charge exit the vent
CD in Vapor Decompressed =	513 lbs	s/yr exit the vent
Toluene in Vapor Decompressed =	0.050616 ft3	exit the vent
Toluene in Vapor Decompressed =	0.011895 lbs	s/charge exit the vent
Toluene in Vapor Decompressed =	80 lbs	s/yr exit the vent
ACR in Vapor Decompressed =	0.075344 ft3	exit the vent
ACR in Vapor Decompressed =	0.023634 lbs	s/charge exit the vent
ACR in Vapor Decompressed =	159 lbs	s/yr exit the vent
N2 in Vapor Decompressed =	16.50 ft3	B exit the vent
0.5 N2 Purge =	5.00 ft3	3/min exit the vent
Venting Time =	1 mi	in
Total N2 Flow =	21.50 ft3	3/min exit the vent
Total Venting Rate =	21.84 ft3	I/min exit the vent
% CD of Total Venting Rate =	1.54 %	
% Toluene of Total Venting Rate =	0.23 %	
% ACR of Total Venting Rate =	0.34 %	
Venting Temperature =	25 C	exit the vent



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles Vent Condenser

TEMPO ID: RLP0015

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The PK emissions are directed to the vent condenser.

Make the same assumptions as for final emulsification venting calculations.

Since nitrogen is much less than saturation at exit condenser conditions, condenser inlet and

exit CD concentration are essentially the same.

For vent down prior to emulsification

Since nitrogen is much less than saturation at exit condenser conditions -

21.84 ft3/min Total Venting Rate = 0.336826 ft3/min CD Venting rate = 0.081236 lbs/min CD Venting rate = 0.08 lbs/charge CD Venting rate = 548 lbs/yr CD Venting rate = 0.050616 ft3/min Toluene Venting Rate = 0.012704 lbs/min Toluene Venting Rate = 0.01 lbs/charge Toluene Venting Rate = Toluene Venting Rate = 86 lbs/yr 0.075344 ft3/min ACR Venting Rate = 0.025242 lbs/min ACR Venting Rate = 0.03 lbs/charge ACR Venting Rate = 170 lbs/yr ACR Venting Rate =

Summary

ACR is potentially emitted at a level of 0.54 tpy, although it is not present in the worst case product. Therefore, ACR totals are not part of the annual VOC emission totals and are calculated only for reference.

Compound	Total	Average	Maximum	Annual
Compound	Loss	Emission	Emission	Emissions
		Rate	Rate	
	- lb/yr	lb/hr	lb/hr	tpy
Total VOC	68685	7.841	35.631	34.342
Chloroprene	67635	7.721	35.171	33.818
1,2-Dichlorobenze	10	0.001	0.001	0.005
Toluene	1050	0.120	0.340	
Total HAPs	68695	7.842	35.513	
Total TAPs	68695	7.842	35.513	34.347



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Unstripped Emulsion Storage Tanks Common Vent & Cap

TEMPO ID: GRP0008

Point Source ID No.: 1700-5

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Basis:

Common vent for Unstripped Emulsion Storage Tank No. 6 (1700-5.3/EQT0150), Unstripped Emulsion Storage Tank No. 7 (1700-5.4/EQT0151), Unstripped Emulsion Storage Tank No. 8 (1700-5.5/EQT0152), Unstripped Emulsion Storage Tank No. 10 (1700-5.6/EQT0153), Unstripped Emulsion Storage Tank No. 11 (1700-5.7/EQT0154), and Unstripped Emulsion Storage Tank No. 14 (1700-5.8/EQT0155).

Emissions:

Compound	Total	Average	Maximum	Annual
1 ' '	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	ib/hr	tpy
Total VOC	5898	0.673	-	2.949
Chloroprene	5826	0.665		2.913
1,2-Dichlorobenze	0.004	0.000	-	0.000
Toluene	51	0.006	-	0.025
Total HAPs	5877	0.671	-	2.938
Total TAPs	5877	0.671		2.938



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 6 Emulsion Storage Tank Manway & Stripper Feed Strainers

TEMPO ID: EQT0167

Point Source ID No.: 1700-5A

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Basis:

No. 6 EST is used solely for storage of unstripped WBG-2 emulsion or stripped emulsion of other types. WBG-2 is fully converted, so CD emissions are deminimus even from unstripped WBG-2 emulsion.

The unstripped emulsion (USE) tank is vented down to atmospheric pressure and the nitrogen blanket which enters the top of the tank is turned off before opening the manway.

Ventilation around the two stripper feed strainers and ventilation on the popcorn drum and emulsion drum are connected to this blower. This is the source of CD to this emisssion point. Based on operator estimates, volume calculations and field observations, 5 to 6 gallons of emulsion drains from the strainer each cleaning.

When the emulsion drum is full, it is pumped back into the USE tank. When the popcorn drum is full it is moved to the drum pad and steamed before landfill disposal.

A strainer is to be cleaned each shift (12 hrs) minimum.

Strainer cleaning frequency does not correlate with stripper feed rate or strippers on line but does correlate with type and type changes (A's to W's in particular)

Per actual practice, while on A-types the frequency is about once/8 hr and once/12 hr while

Emissions are based on spot sampling data conducted in September-October 2002 which showed an average chloroprene (CD) concentration of 3.4 ppm with a maximum concentration of

The maximum concentration is estimated to be 10% greater than the maximum measured concentration.

Toluene and other VOC emissions are estimated using the fraction of saturation of CD.

Conservatively assume ACR is still present in the material.

Calculation basis provided by Mr. P. Offut, DuPont

Rated Capacity of Blower =

7400 cfm

Amount of Time Discharging =

8760 hours/vr

Average CD in Air Exhausted =

3.4 ppm CD by volume 5,17 ppm CD by volume

Maximum CD in Air Exhausted = Molecular Weight of CD =

88.54 lb/lb-mole

Molecular Weight of Toluene =

92.14 lb/lb-mole

Molecular Weight of ACR =

122.99 lb/lb-mole

Temperature =

25 °C

Pressure =

14.696 psia



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 6 Emulsion Storage Tank Manway & Stripper Feed Strainers

TEMPO ID: EQT0167

Point Source ID No.: 1700-5A

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Average Emission Rates

Chloroprene

Using given information,

Average CD Emissions =

0.0252 cfm CD

Using the Ideal Gas Law,

Average CD Emissions = Average CD Emissions =

0.000064 moles CD/minute 0.005682 lbs CD/minute

Average CD Emissions =

0.341 lbs CD/hour

Average CD Emissions =

2986 lbs/vr

Average CD Emissions =

1.49 tons/yr

Toluene

Using the Ideal Gas Law,

V.P. of CD at Saturation =

189.00 mm Hg

Total Vapor =

0.002550 moles/ft3

Mole Fraction CD =

0.00034 %

CD Vapor =

0.00000001 moles/ft3

CD Partial Pressure =

0.003 mm Hg

Ratio =

0.000014

V.P. of Toluene at Saturation =

28.40 mm Hq

Toluene Partial Pressure ≈

0.0004 mm Hg

Toluene Vapor = 0.00000001 moles/ft3

Toluene Vapor =

0.00001 moles/min

Toluene Vapor =

0.001 lb/min

Toluene Vapor =

0.05 lb/hr

Toluene Vapor =

0.23 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 6 Emulsion Storage Tank Manway & Stripper Feed Strainers

TEMPO ID: EQT0167

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ACR

Ratio = 0.000014

V.P. of ACR at Saturation = 42.28 mm Hg ACR Partial Pressure = 0.0006 mm Hg

ACR Vapor = 0.000000002 moles/ft3

ACR Vapor = 0.00001 moles/min

ACR Vapor = 0.0018 lb/min
ACR Vapor = 0.11 lb/hr
ACR Vapor = 0.46 tpy

Maximum Emission Rates

Using given information,

Maximum CD Emissions = 0.0383 cfm CD

Using the Ideal Gas Law,

Maximum CD Emissions = 0.000098 moles CD/minute

Maximum CD Emissions = 0.008639 lbs CD/minute

Maximum CD Emissions = 0.518 lbs CD/hour



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 6 Emulsion Storage Tank Manway & Stripper Feed Strainers

TEMPO ID: EQT0167

Point Source ID No.: 1700-5A

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Toluene

Using the Ideal Gas Law,

V.P. of CD at Saturation = 189.00 mm Hg

Total Vapor = 0.002550 moles/ft3

Mole Fraction CD = 0.000517 %

CD Vapor = 0.00000001 moles/ft3

CD Partial Pressure = 0.004 mm Hg

Ratio = 0.000021.

V.P. of Toluene at Saturation = 28.40 mm Hg

Toluene Partial Pressure = 0.0006 mm Hg

Toluene Vapor = 0.000000002 moles/ft3
Toluene Vapor = 0.00001 moles/min
Toluene Vapor = 0.0014 lb/min

Toluene Vapor = 0.0014 lb/hr

ACR

Ratio = 0.000021

V.P. of ACR at Saturation = 42.28 mm Hg ACR Partial Pressure = 0.0009 mm Hg

ACR Partial Pressure = 0.0009 mm Hg
ACR Vapor = 0.000000003 moles/ft3

ACR Vapor = 0.00000003 moles/ft3

ACR Vapor = 0.00002 moles/min

ACR Vapor = 0.0027 lb/min

ACR Vapor = 0.16 lb/hr

Summary

Compound	Total Loss	Average Emission Rate	Maximum Emission Rate	Annual Emissions
	lb/yr_	lb/hr	lb/hr	tpy
Total VOC	4381	0.500	0.761	2.191
Chloroprene	2986	0.341	0.518	1.493
Toluene	467	0.053	0.081	0.234
Total HAPs	3453	0.394	0.599	1.727
Total TAPs	3453	0.394	0.599	1.727



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettle No. 1 & 2 Manway / Drop Strainers

TEMPO ID: EQT0135

Point Source ID No.: 1700-13

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Basis:

The manways and drop strainers on each PK are equipped with ventilation systems. The strainer cleanings solids drums and emulsion drums are equipped with lids and protective ventilation.

Since the manway is seldom opened when the PK is charged, emissions should be small. The manway on each PK is opened once per day for inhibitor spraying of the dome. Since this is done after the charge is completed and cooled, CD concentrations are low and emissions

Opening and cleaning the strainer after dropping the charge and water flushing results in emissions. Emissions are based on spot sampling data for the exhaust blower for PK 3, 4 & 5 conducted in September-October 2002 which showed an average chloroprene (CD) concentration of 14.45 ppm with a maximum concentration of 15.37 ppm.

The maximum concentration is estimated to be 10% greater than the maximum measured concentration.

Toluene and other VOC emissions are estimated using the fraction of saturation of CD.

Conservatively assume ACR is still present in the material.

Calculation basis provided by Mr. P. Offut, DuPont

6900 cfm Rated Capacity of Blower =

8760 hours/yr Amount of Time Discharging =

14.45 ppm CD by volume Average CD in Air Exhausted = 16.91 ppm CD by volume Maximum CD in Air Exhausted =

88.54 lb/lb-mole Molecular Weight of CD = 92.14 lb/lb-mole Molecular Weight of Toluene = 122,99 lb/lb-mole Molecular Weight of ACR =

30 °C Temperature = 14.696 psia Pressure =

Average Emission Rates

Chloroprene

Using given information,

0.0997 cfm CD Average CD Emissions =



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettle No. 1 & 2 Manway / Drop Strainers

TEMPO ID: EQT0135

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Using the Ideal Gas Law,

Average CD Emissions = 0.000250 moles CD/minute
Average CD Emissions = 0.022144 lbs CD/minute
Average CD Emissions = 1.329 lbs CD/hour

Average CD Emissions = 11639 lbs/yr Average CD Emissions = 5.82 tons/yr

Toluene

Using the Ideal Gas Law,

V.P. of CD at Saturation = 280.10 mm Hg

Total Vapor = 0.002508 moles/ft3

Mole Fraction CD = 0.001445 %

CD Vapor = 0.00000004 moles/ft3

CD Partial Pressure = 0.011 mm Hg

Ratio = 0.000039

V.P. of Toluene at Saturation = 36.61 mm Hg

Toluene Partial Pressure = 0.0014 mm Hq

Toluene Vapor = 0.000000005 moles/tt3
Toluene Vapor = 0.00003 moles/min
Toluene Vapor = 0.003 lb/min

Toluene Vapor = 0.18 lb/hr Toluene Vapor = 0.79 tpy

ACR

Ratio = 0.000039

V.P. of ACR at Saturation = 53.19 mm Hg

ACR Partial Pressure = 0.0021 mm Hg

ACR Vapor = 0.00000001 moles/ft3

ACR Vapor = 0.00005 moles/min

ACR Vapor = 0.0058 lb/min.

ACR Vapor = 0.35 lb/hr

ACR Vapor = 1.54 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettle No. 1 & 2 Manway / Drop Strainers

TEMPO ID: EQT0135

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Maximum Emission Rates

Chloroprene

Using given information,

Maximum CD Emissions =

0.1167 cfm CD

Using the Ideal Gas Law,

0.000293 moles CD/minute Maximum CD Emissions = Maximum CD Emissions = Maximum CD Emissions =

0.025910 lbs CD/minute 1.555 lbs CD/hour

Toluene

Using the Ideal Gas Law,

V.P. of CD at Saturation =

280.10 mm Hq

Total Vapor =

0.002508 moles/ft3

Mole Fraction CD =

0.0016907 %

CD Vapor =

0.00000004 moles/ft3

CD Partial Pressure =

0.013 mm Hg

Ratio =

0.000046

V.P. of Toluene at Saturation =

36.61 mm Hg

Toluene Partial Pressure =

0.0017 mm Hg

Toluene Vapor =

0.00000001 moles/ft3 0.00004 moles/min

Toluene Vapor =

0.0035 lb/min

Toluene Vapor =

Toluene Vapor =

0.21 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettle No. 1 & 2 Manway / Drop Strainers

TEMPO ID: EQT0135

Point Source ID No.: 1700-13

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of

ACR

Ratio = 0.000046

V.P. of ACR at Saturation = 53.19 mm Hg ACR Partial Pressure = 0.0024 mm Hg

ACR Vapor = 0.00000001 moles/ft3
ACR Vapor = 0.00006 moles/min

ACR Vapor = 0.0068 lb/min ACR Vapor = 0.41 lb/hr

Summary

Compound	Total	Average	Maximum	Annual
•	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	16292	1.860	2.176	8.146
Chloroprene	11639	1.329	1.555	5.820
Toluene	1583	0.181	0.211	0.792
Total HAPs	13222	1.509	1.766	6.611
Total TAPs	13222	1.509	1.766	6.611



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles No. 3, 5 & 5 Manway / Drop Strainers

TEMPO ID: EQT0136

Point Source ID No.: 1700-13A

Page

Basis:

The manways, sample ports and drop strainers on each PK are equipped with ventilation systems. The strainer cleanings solids drums and emulsion drums are equipped with lids and protective ventilation.

With the changes in PK nitrogen blanketing and CD concentrations being low at the end of the charge, the emissions from the sample port should be very small

Since the manhole is seldom opened when the PK is charged, emissions should be small The manway on each PK is to be opened once per day for inhibitor spraying of the dome. Since this is done after the charge is completed and cooled, CD concentrations are low and emissions should be low.

Opening and cleaning the strainer after dropping the charge and water flushing results in emissions. Emissions are based on spot sampling data conducted in September-October 2002 which showed an average chloroprene (CD) concentration of 14.45 ppm with a maximum concentration of 15.37 ppm.

The maximum concentration is estimated to be 10% greater than the maximum measured concentration.

Toluene and other VOC emissions are estimated using the fraction of saturation of CD.

Conservatively assume ACR is still present in the material.

Calculation basis provided by Mr. P. Offut, DuPont

Rated Capacity of Blower = 8500 cfm
Amount of Time Discharging = 8760 hours/yr

Average CD in Air Exhausted = 14.45 ppm CD by volume

Maximum CD in Air Exhausted = 16.91 ppm CD by volume

Molecular Weight of CD = 88.54 lb/lb-mole

Molecular Weight of Toluene = 92.14 lb/lb-mole

Molecular Weight of ACR = 122.99 lb/lb-mole

Temperature = 30 °C Pressure = 14.696 psia

Average Emission Rates

Chloroprene

Using given information,

Average CD Emissions = 0.1228 cfm CD



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles No. 3, 5 & 5 Manway / Drop Strainers

TEMPO ID: EQT0136

Point Source ID No.: 1700-13A

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Using the Ideal Gas Law,

Average CD Emissions = 0.000308 moles CD/minute
Average CD Emissions = 0.027279 lbs CD/minute
Average CD Emissions = 1.637 lbs CD/hour
Average CD Emissions = 14338 lbs/yr

Average CD Emissions = 14338 lbs/yr Average CD Emissions = 7.17 tons/yr

Toluene

Using the Ideal Gas Law,

V.P. of CD at Saturation = 280.10 mm Hg

Total Vapor = 0.002508 moles/ft3

Mole Fraction CD = 0.001445 %

CD Vapor = 0.00000004 moles/ft3

CD Partial Pressure = 0.011 mm Hg

Ratio = 0.000039

V.P. of Toluene at Saturation = 36.61 mm Hg

Toluene Partial Pressure = 0.0014 mm Hg

Toluene Vapor = 0.00000005 moles/ft3
Toluene Vapor = 0.00004 moles/min
Toluene Vapor = 0.004 lb/min
Toluene Vapor = 0.22 lb/hr

Toluene Vapor = 0.98 tpy

ACR

Ratio = 0.000039

V.P. of ACR at Saturation = 53.19 mm Hg

ACR Partial Pressure = 0.0021 mm Hg

ACR Vapor = 0.00000001 moles/ft3
ACR Vapor = 0.00006 moles/min
ACR Vapor = 0.0072 lb/min

ACR Vapor = 0.43 lb/hrACR Vapor = 1.89 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles No. 3, 5 & 5 Manway / Drop Strainers

TEMPO ID: EQT0136

Point Source ID No.: 1700-13A

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Maximum Emission Rates

Chloroprene

Using given information,

Maximum CD Emissions =

0.1437 cfm CD

Using the Ideal Gas Law,

Maximum CD Emissions = Maximum CD Emissions = Maximum CD Emissions =

0.000360 moles CD/minute 0.031918 lbs CD/minute 1.915 lbs CD/hour

Toluene

Using the Ideal Gas Law,

V.P. of CD at Saturation =

280.10 mm Hg

Total Vapor =

0.002508 moles/ft3

Mole Fraction CD =

0.0016907 %

CD Vapor =

0.00000004 moles/ft3

CD Partial Pressure =

0.013 mm Hg

Ratio =

0.000046

V.P. of Toluene at Saturation =

36.61 mm Hg 0.0017 mm Hg

Toluene Partial Pressure =

Toluene Vapor =

0.00000001 moles/ft3

Toluene Vapor =

0.00005 moles/min

Toluene Vapor =

0.0043 lb/min

Toluene Vapor =

0.26 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Kettles No. 3, 5 & 5 Manway / Drop Strainers

TEMPO ID: EQT0136

Point Source ID No.: 1700-13A

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ACR

Ratio = 0.000046

V.P. of ACR at Saturation = 53.19 mm Hg ACR Partial Pressure = 0.0024 mm Hg

ACR Vapor = 0.00000001 moles/ft3
ACR Vapor = 0.00007 moles/min
ACR Vapor = 0.0084 lb/min

· ACR Vapor = 0.51 lb/hr

Summary

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
]	Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	20070	2.291	2.681	10.035
Chloroprene	14338	1.637	1.915	7.169
Toluene	1950	0.223	0.260	0.975
Total HAPs	16288	1.859	2.176	8.144
Total TAPs	16288	1.859	2.176	8.144



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Solution Makeup Manhole Common Vent

TEMPO ID: GRP0006

Point Source ID No.: 1700-14B

Page

Basis:

Common vent for Acetic Acid Make-Up Tank (1700-14B.1/EQT0137), Acetic Acid Hold-Up Tank (1700-14B.2/EQT00138), and Stabilizer & Catalyst Tanks Manholes Vent (1700-14B.3/RLP0013).

Emissions:

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
	}	Rate	. Rate	
	lb/yr	lb/hr	lb/hr	tpy
PM-10	131	1.473	9.092	0.066
Total VOC	1119	0.128	0.602	0.559
Chloroprene	738	0.084	0.093	0.369
Toluene	242	0.028	0.494	. 0.121
Total HAPs	980	0.112	0.586	0.490
Total TAPs	980	0.112	0.586	0.490



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Solution Makeup Manhole Common Vent

TEMPO ID: GRP0006

Point Source ID No.: 1700-14B Page 2 of 4



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Stabilizer Tanks Manholes Vent

TEMPO ID: RLP0013

Point Source ID No.: 1700-14B.3

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Basis:

Based on 10 hr TWA area data developed between 1999 and 2001, the average concentration of CD in the building air is 0.56 ppmv.

Monitoring data for toluene between February 2001 and September 2002 indicate an average concentration of 0.176 ppm. Toluene is emitted during makeup of toluene based stabilizer when the manhole is open.

There is no ACR present in toluene based stabilizer, and no realistic opportunity for ACR to be present in the ambient air around the Stabilizer tanks.

The maximum concentration is estimated to be 10% greater than the maximum measured concentration for CD and toluene.

PTZ, TETD, Lowinox, and Neozone A are added to the makeup tanks through the manholes resulting in particulate emissions.

Estimated that 0.1% of the TETD, Lowinox, PTZ and Neozone A transferred becomes airborne. Estimated that 50% of the airborne dust is captured by exhaust system. Remainder is captured in building.

Calculation basis provided by Mr. P. Offut, DuPont

Rated Capacity of Blower =

11100 cfm

Amount of Time Discharging =

8760 hours/yr

Amount of Time Discharging =

8760 hours/yr while on toluene stabilizer types

Average CD in Air Exhausted =

0.56 ppm CD by volume 0.62 ppm CD by volume

Maximum CD in Air Exhausted =

0.176 ppm toluene by volume

Avg. Toluene in Air Exhausted = Max. Toluene in Air Exhausted =

3.1464 ppm toluene by volume

· Avg. ACR in Air Exhausted =

0 ppm ACR by volume 0 ppm ACR by volume

Max. ACR in Air Exhausted =

88.54 lb/lb-mole

Molecular Weight of CD = Molecular Weight of Toluene =

92.4 lb/lb-mole

Molecular Weight of ACR =

122.99 lb/lb-mole

Temperature = Pressure =

25 °C

14.696 psia

PTZ Used = Fraction Airbome =

2650 lb/yr 0.1 %



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Stabilizer Tanks Manholes Vent

TEMPO ID: RLP0013

Point Source ID No.: 1700-14B.3

TETD Used = 191015 lb/yr
Lowinox Used = 21660 lb/yr
Neozone A Used = 47184 lb/yr
Fraction Airborne = 0.1 %

Average Solids Addition Time = 89 hours Minimum Solids Addition Time = 14.44 hours

Average VOC Emission Rates

Chloroprene

Using given information,

Average CD Emissions = 0.0062 cfm CD

Using the Ideal Gas Law,

Average CD Emissions = 0.000016 moles/minute

Average CD Emissions = 0.001404 lbs/minute

Average CD Emissions = 0.084 lbs/hour

Average CD Emissions = 738 lbs/yr

Average CD Emissions = 0.37 tons/yr

Toluene

Using given information,

Average Toluene Emissions = 0.0020 cfm toluene

Using the Ideal Gas Law,

Average Toluene Emissions = 0.000005 moles/minute
Average Toluene Emissions = 0.000460 lbs/minute
Average Toluene Emissions = 0.028 lbs/hour
Average Toluene Emissions = 242 lbs/yr
Average Toluene Emissions = 0.12 tons/yr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Stabilizer Tanks Manholes Vent

TEMPO ID: RLP0013

Point Source ID No.: 1700-14B.3

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Maximum VOC Emission Rates

Chloroprene

Using given information,

Maximum CD Emissions =

0.0068 cfm CD

Using the Ideal Gas Law,

Maximum CD Emissions =

0.000017 moles CD/minute

Maximum CD Emissions =

0.001544 lbs CD/minute

Maximum CD Emissions =

0.093 lbs CD/hour

Toluene

Using given information,

Maximum Toluene Emissions =

0.0349 cfm toluene

Using the Ideal Gas Law,

Maximum Toluene Emissions = Maximum Toluene Emissions =

0.000089 moles/minute 0.008231 lbs/minute 0.494 lbs/hour

Maximum Toluene Emissions =



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Stabilizer Tanks Manholes Vent

TEMPO ID: RLP0013

Point Source ID No.: 1700-14B.3

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PM/PM-10 Emissions

Capture Efficiency =

50 %

PM/PM-10 Emissions = Process rate, lb/yr x Fraction Airborne x Capture Efficiency / 104 hr/yr

= $(2650 \text{ ib/yr} \times 0.1\% + 259859 \text{ ib/yr} \times 0.1\%) \times 50\% / 89 \text{ hr/yr}$

= 1.473 lb/hr

= 0.0656 tpy

Maximum PM/PM-10 Emission Rates

Capture Efficiency =

50 %

PM/PM-10 Emissions = Process rate, lb/yr x Fract. Airborne x Capture Efficiency / 16.88 hr/yr

= $(2650 \text{ lb/yr} \times 0.1\% + 259859 \text{ lb/yr} \times 0.1\%) \times 50\% / 14.44 \text{ hr/yr}$

9.092 lb/hr

Summary

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
PM-10	131	1.473	9.092	0.066
Total VOC	980	0.112	0.586	0.490
Chloroprene	738	0.084	0.093	0.369
Toluene	242	0.028	0.494	0.121
Total HAPs	980	0.112	0.586	0.490
Total TAPs	980	0.112	0.586	0.490



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jets Emissions Cap

TEMPO ID: GRP0012

Point Source ID No.: 1700-20 CAP

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Basis:

Emissions cap for CD Refining Column Jet (1700-20/EQT0139) and CD Refining Column Jet (Spare) (1700-20A/EQT00140).

Emissions:

		Average	Maximum	Annual
Compound	Total	Average		Emissions
- • 	Loss	Emission	Emission	Ettilogiona
ı		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
110	6597	0.753	0.828	3.298
NOx		2.831	3,114	12.401
Total VOC	24801		3.113	12.397
Chloroprene	24794	2.830		
	7	0.001	0.001	0.003
Toluene	0.07	0.000008	0.000009	0.00004
Ammonia			3.114	
Total HAPs	24801	2.831		
Total TAPs	24801	2.831	3.114	12.401



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet

TEMPO ID: EQT0139

Point Source ID No.: 1700-20

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Basis:

Emissions are based on sampling data on March 12, 2002 and March 21, 2002 by METCO Environmental.

On March 12, 2002 type AD was being produced, which includes toluene.

On March 21, 2002 type WHV was being produced which does not inloude toluene.

The highest vent rate measured is 4.584 dscfm.

The highest NOx concentration measured is 22945.5 ppmv.

The highest chloroprene (CD) concentration measured is 44807 ppmv.

The highest toluene concentration measured is 12 ppmv.

Ammonia was measured at less than 0.68 ppmv. Conservatively assume a concentration of 0.68 ppmv.

The maximum concentrations are estimated to be 10% greater than the maximum measured concentration.

Calculation basis provided by Mr. P. Offut, DuPont

Vent Rate =

4.584 cfm

Amount of Time Venting =

8760 hours/yr

Average NOx in Air Vented =

Maximum NOx in Air Vented =

22945.5 ppm NOx by volume

25240 ppm NOx by volume

Average CD in Air Vented =

44807 ppm CD by volume

Maximum CD in Air Vented =

49288 ppm CD by volume

Avg. Toluene in Air Vented =

12 ppm toluene by volume

Max. Toluene in Air Vented =

13.2 ppm toluene by volume

Avg. Ammonia in Air Vented =

0.68 ppm ammonia by volume

Max. Ammonia in Air Vented =

0.75 ppm ammonia by volume

Molecular Weight of NOx =

46 lb/lb-mole

Molecular Weight of CD =

88.54 lb/lb-mole

Molecular Weight of Toluene =

92.4 lb/lb-mole

Molecular Weight of Ammonia =

17 lb/lb-mole

Temperature =

20 °C

Pressure =

14.696 psia



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet

TEMPO ID: EQT0139

Point Source ID No.: 1700-20 Page 2 of 5

Average Emission Rates

Nitrogen Dioxide

Using given information,

Average NOx Emissions =

0.11 cfm NOx

Using the Ideal Gas Law,

Average NOx Emissions = 0.000273 moles/minute
Average NOx Emissions = 0.012551 lbs/minute
Average NOx Emissions = 0.753 lbs/hour
Average NOx Emissions = 6597 lbs/yr
Average NOx Emissions = 3.30 tons/yr

Chloroprene

Using given information,

Average CD Emissions = 0.2054 cfm CD

Using the Ideal Gas Law,

Average CD Emissions = 0.000533 moles/minute
Average CD Emissions = 0.047173 lbs/minute
Average CD Emissions = 24794 lbs/yr
Average CD Emissions = 12.40 tons/yr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet

TEMPO ID: EQT0139

Point Source ID No.: 1700-20 Page 3 of !

Toluene

Using given information,

Average Toluene Emissions = 0.0001 cfm toluene

Using the Ideal Gas Law,

Average Toluene Emissions = 0.0000001 moles/minute
Average Toluene Emissions = 0.000013 lbs/minute
Average Toluene Emissions = 0.0008 lbs/hour
Average Toluene Emissions = 7 lbs/yr
Average Toluene Emissions = 0.0003 tons/yr

Ammonia

Using given information,

Average Ammonia Emissions = 0.000003 cfm ammonia

Using the Ideal Gas Law,

Average Ammonia Emissions = 0.0000001 moles/minute
Average Ammonia Emissions = 0.0000001 lbs/minute
Average Ammonia Emissions = 0.000008 lbs/hour
Average Ammonia Emissions = 0.000008 lbs/yr
Average Ammonia Emissions = 0.0000001 moles/minute
0.0000001 lbs/minute
0.00000001 lbs/minute
0.00000001 lbs/minute
0.00000001 lbs/minute
0.00000001 lbs/minute



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet

TEMPO ID: EQT0139

Point Source ID No.: 1700-20

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Maximum Emission Rates

NOx

Using given information,

Maximum NOx Emissions =

0.1157 cfm CD

Using the Ideal Gas Law,

Maximum NOx Emissions =
Maximum NOx Emissions =
Maximum NOx Emissions =

0.00300 moles/minute 0.013806 lbs/minute 0.828 lbs/hour

Chloroprene

Using given information,

Maximum CD Emissions =

0.2259 cfm CD

Using the Ideal Gas Law,

Maximum CD Emissions = Maximum CD Emissions =

Maximum CD Emissions =

0.000586 moles CD/minute 0.051891 lbs CD/minute 3.113 lbs CD/hour

Toluene

Using given information,

Maximum Toluene Emissions =

0.0001 cfm toluene

Using the Ideal Gas Law,

Maximum Toluene Emissions = Maximum Toluene Emissions =

Maximum Toluene Emissions =

0.0000002 moles/minute 0.00001 lbs/minute 0.0009 lbs/hour



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet

TEMPO ID: EQT0139

Page Point Source ID No.: 1700-20

Ammonia

Using given information,

0.000003 cfm ammonia Maximum Ammonia Emissions =

Using the Ideal Gas Law,

0.00000001 moles/minute Maximum Ammonia Emissions = 0.0000002 lbs/minute Maximum Ammonia Emissions = Maximum Ammonia Emissions = 0.000009 lbs/hour

Compound	Total	Average	Maximum	Annual
Compound	Loss	Emission		
-		Rate	Rate .	
	lb/yr	lb/hr	lb/hr	tpy
NOx	6597	0.753	0.828	3.298
Total VOC	24801	2.831	3.114	12.401
Chloroprene	24794	2.830	3.113	12.397
Toluene	7	0.001	0.001	0.003
Ammonia	0.07	0.000008	0.000009	
Total HAPs	24801	2.831	3.114	
Total TAPs	24801	2.831	3.114	12.401



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet (Spare)

TEMPO ID: EQT0140

Point Source ID No.: 1700-20A Page 1 of

Basis:

Emissions are based on sampling data on March 12, 2002 and March 21, 2002 by METCO

On March 12, 2002 type AD was being produced, which includes toluene.

On March 21, 2002 type WHV was being produced which does not inlcude toluene.

The highest vent rate measured is 4.584 dscfm.

The highest NOx concentration measured is 22945.5 ppmv.

The highest chloroprene (CD) concentration measured is 44807 ppmv.

The highest toluene concentration measured is 12 ppmv.

Ammonia was measured at less than 0.68 ppmv. Conservatively assume a concentration of 0.68 ppmv.

The maximum concentrations are estimated to be 10% greater than the maximum measured concentration.

Calculation basis provided by Mr. P. Offut, DuPont

Vent Rate = 4.584 cfm

Amount of Time Venting = 8760 hours/yr

Average NOx in Air Vented = 22945.5 ppm NOx by volume

Maximum NOx in Air Vented = 25240 ppm NOx by volume

Average CD in Air Vented = 44807 ppm CD by volume

Maximum CD in Air Vented = 49288 ppm CD by volume

Avg. Toluene in Air Vented = 12 ppm toluene by volume

Max. Toluene in Air Vented = 13.2 ppm toluene by volume

Avg. Ammonia in Air Vented = 0.68 ppm ammonia by volume

Max. Ammonia in Air Vented = 0.75 ppm ammonia by volume

Molecular Weight of NOx = 46 lb/lb-mole

Molecular Weight of CD = 88.54 lb/lb-mole

Molecular Weight of Toluene = 92.4 lb/lb-mole

Molecular Weight of Ammonia = 17 lb/lb-mole

Temperature = 20 °C

Pressure = 14.696 psia



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet (Spare)

TEMPO ID: EQT0140

Point Source ID No.: 1700-20A Page 2 of 5

Average Emission Rates

NOx

Using given information,

Average NOx Emissions =

0.11 cfm NOx

Using the Ideal Gas Law,

Average NOx Emissions = 0.000273 moles/minute
Average NOx Emissions = 0.012551 lbs/minute
Average NOx Emissions = 0.753 lbs/hour
Average NOx Emissions = 6597 lbs/yr
Average NOx Emissions = 3.30 tons/yr

Chloroprene

Using given information,

Average CD Emissions = 0.2054 cfm CD

Using the Ideal Gas Law,

Average CD Emissions = 0.000533 moles/minute
Average CD Emissions = 0.047173 lbs/minute
Average CD Emissions = 24794 lbs/yr
Average CD Emissions = 12.40 tons/yr



RTP Environmental Associates, Inc. Kenner, Louisiana

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Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet (Spare)

TEMPO ID: EQT0140

Point Source ID No.: 1700-20A Page 3

Toluene

Using given information,

Average Toluene Emissions = 0.0001 cfm toluene

Using the Ideal Gas Law,

Average Toluene Emissions = 0.0000001 moles/minute Average Toluene Emissions = 0.000013 lbs/minute

Average Toluene Emissions = 0.0008 lbs/hour Average Toluene Emissions = 7 lbs/yr

Average Toluene Emissions = 7 lbs/yr Average Toluene Emissions = 0.003 tons/yr

Ammonia

Using given information,

Average Ammonia Emissions = 0.000003 cfm ammonia

Using the Ideal Gas Law,

Average Ammonia Emissions = 0.00000001 moles/minute

Average Ammonia Emissions = 0.0000001 lbs/minute Average Ammonia Emissions = 0.000008 lbs/hour

Average Ammonia Emissions = 0.000008 lbs/hou Average Ammonia Emissions = 0.07 lbs/yr

Average Ammonia Emissions = 0.00004 tons/yr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet (Spare)

TEMPO ID: EQT0140

Point Source ID No.: 1700-20A Page 4 of

Maximum Emission Rates

NOx

Using given information,

Maximum NOx Emissions =

0.1157 cfm CD

Using the Ideal Gas Law,

Maximum NOx Emissions = Maximum NOx Emissions =

. 0.000300 moles/minute 0.013806 lbs/minute

Maximum NOx Emissions =

0.828 lbs/hour

Chloroprene

Using given information,

Maximum CD Emissions =

0.2259 cfm CD

Using the Ideal Gas Law,

Maximum CD Emissions =

Maximum CD Emissions =

0.000586 moles CD/minute 0.051891 lbs CD/minute

Maximum CD Emissions =

3.113 lbs CD/hour

Toluene

Using given information,

Maximum Toluene Emissions =

0.0001 cfm toluene

Using the Ideal Gas Law,

Maximum Toluene Emissions =

Maximum Toluene Emissions =

0.000002 moles/minute 0.00001 lbs/minute

Maximum Toluene Emissions =

0.0009 lbs/hour



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: CD Refining Column Jet (Spare)

TEMPO ID: EQT0140

Point Source ID No.: 1700-20A

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Ammonia

Using given information,

Maximum Ammonia Emissions =

0.000003 cfm ammonia

Using the Ideal Gas Law,

Maximum Ammonia Emissions = Maximum Ammonia Emissions =

0.0000001 moles/minute 0.0000002 lbs/minute

Maximum Ammonia Emissions =

0.000009 lbs/hour

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
	1	Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
NOx	6597	0.753	0.828	3.298
Total VOC	24801	2.831	3.114	12.401
Chloroprene	24794	2.830	3.113	12.397
Toluene	. 7	0.001	0.001	0.003
Ammonia	0.07	0.000008	0.000009	.0.00004
Total HAPs	24801	2.831	3.114	12.401
Total TAPs	24801	2.831	3,114	12.401



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Product Drying Cap

TEMPO ID: GRP0007

Point Source ID No.: 1700-25A

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Basis:

For Washbelt and Dryer emissions, use analytical data for CD in stripped emulsion collected for 1996 Title V calculations and lbs of unstripped emulsion to the finishing lines and WD production for chloroprene (CD) and ACR emissions and AD production for toluene emissions. Cap covers 1700-25, East Wash Belt Dryer, 1700-26, West Wash Belt Dryer, 1700-27, East Dryer Hot Exhaust, 1700-28, West Dryer Hot Exhaust, 1700-45, No. 1 East Dryer Cooling Compartment, 1700-46, No. 1 West Dryer Cooling Compartment, 1700-47, No. 2 East Dryer Cooling Compartment, and 1700-48, No. 2 West Dryer Cooling Compartment. Calculation basis provided by Mr. P. Offut, DuPont

% VOC Emissions from Washbelt = 16.35 %
% VOC Emissions from Dryer = 83.65 %
Total VOC in Stripped Emulsion = 136416 lbs/yr

CD in Stripped Emulsion = 113680 lbs/yr in worst emitting product ACR in Stripped Emulsion = 22736 lbs/yr in worst emitting product

Max. Toluene in Stripped Emulsion = 46130 lbs/yr
Operating Hours = 8760 hours/yr

Wash Belt Calculations

Emission Rates

Emissions = Total in Stripped Emulsion / Operating Hours

Calculate total emissions from the washbelts and dryers

CD Emissions = 12.98 lbs/hr
ACR Emissions = 2.60 lbs/hr
Toluene Emissions = 5.27 lbs/hr

Calculate total emissions from the washbelts

CD Emissions = 2.12 lbs/hr
CD Emissions = 18586 lb/yr
CD Emissions = 9.29 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Product Drying Cap

TEMPO ID: GRP0007

Point Source ID No.: 1700-25A Page 2 of 3

ACR Emissions = 0.42 lbs/hr ACR Emissions = 3717 lb/yr

ACR Emissions ≈ 1.86 tpy

Toluene Emissions = 0.86 lbs/hr
Toluene Emissions = 7542 ib/yr
Toluene Emissions = 3.77 tpy

Dryer Calculations

Emission Rates

Emissions = Total in Stripped Emulsion / Operating Hours

Calculate total emissions from the washbelts and dryers

CD Emissions = 12.98 lbs/hr
ACR Emissions = 2.60 lbs/hr
Toluene Emissions = 5.27 lbs/hr

Calculate total emissions from the dryer vents

CD Emissions = 10.86 lbs/hr CD Emissions = 95093 lb/yr

CD Emissions = 47.55 tpy

ACR Emissions = 2.17 lbs/hr ACR Emissions = 19019 lb/yr ACR Emissions = 9.51 tpy

Toluene Emissions = 4.41 lbs/hr

Toluene Emissions = 38588 lb/yr Toluene Emissions = 19.29 tpy

1,2-Dichlorobenzene Emissions = 0.01 lbs/hr 1,2-Dichlorobenzene Emissions = 60 lb/yr

1,2-Dichlorobenzene Emissions = 0.03 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Product Drying Cap

TEMPO ID: GRP0007

Point Source ID No.: 1700-25A Page 3 of 3

Cooling Compartment Calculations

Effectively all VOC is expected to be removed in the wash belts and dryers. Therefore, VOC emissions from the cooling compartments are expected to be <0.01 tpy.

Summary

Toluene is potentially emitted at a level of 23.36 tpy, although it is not present in the worst case product.

Therefore, toluene totals are not part of the annual VOC emission totals and are calculated only for reference.

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
}	ł	Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	136416	15.573	15.573	68.208
Chloroprene	113680	12.977	12.977	56.840
1,2-Dichlorobenze	60	0.007	0.007	0.030
Toluene	46130	5.266	5.266	23.065
Total HAPs	159870	18.250	18.250	79.935
Total TAPs	159870	18.250	18.250	79.935



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: East Wash Belt Dryer

TEMPO ID: EQT0142

Point Source ID No.: 1700-25

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Basis:

For Washbelt and Dryer emissions, use analytical data for CD in stripped emulsion collected for 1996 Title V calculations and lbs of unstripped emulsion to the finishing lines and WD production for chloroprene (CD) and ACR emissions and AD production for toluene emissions. Total emissions for the wash belts are covered under 1700-25A, Product Drying Cap.

Assumes full throughput for each drying line.

Calculation basis provided by Mr. P. Offut, DuPont

% VOC Emissions from Washbelt =

16.35 %

% VOC Emissions from Dryer =

83.65 %

Total VOC in Stripped Emulsion =

136416 lbs/vr

CD in Stripped Emulsion =

113680 lbs/yr in worst emitting product

ACR in Stripped Emulsion =

22736 lbs/yr in worst emitting product

Max. Toluene in Stripped Emulsion =

46130 lbs/vr

Operating Hours =

8760 hours/yr

Average Emission Rates

Average Emissions = Total in Stripped Emulsion / Operating Hours

Calculate total emissions from the washbelts and dryers

Average CD Emissions =

12.98 lbs/hr

Average ACR Emissions =

2.60 lbs/hr

Average Toluene Emissions =

5.27 lbs/hr

Calculate total emissions from the washbelts

Average CD Emissions =

2.12 lbs/hr

Average CD Emissions =

18586 lb/yr

Average CD Emissions =

9.29 tpy

Average ACR Emissions =

0.42 lbs/hr

Average ACR Emissions =

3717 lb/yr

Average ACR Emissions =

1.86 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: East Wash Belt Dryer

TEMPO ID: EQT0142

Point Source ID No.: 1700-25

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Average Toluene Emissions =

0.86 lbs/hr

Average Toluene Emissions =

7542 lb/yr

Average Toluene Emissions =

3.77 tpy

Maximum Emission Rates

Maximum emission rates are equal to average rates.

Summary

Toluene is potentially emitted at a level of 3.82 tpy, although it is not present in the worst case product.

Therefore, toluene totals are not part of the annual VOC emission totals and are calculated only for reference.

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
 	lb/yr	lb/hr	lb/hr	tpy
Total VOC	22304	2.546	2.546	
Chloroprene	18586	2.122	2.122	9.293
Toluene	7542	0.861	0.861	3.771
Total HAPs	26129	2.983	2.983	13.064
Total TAPs	26129	2.983	2.983	13.064



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: West Wash Belt Dryer

TEMPO ID: EQT0143

Point Source ID No.: 1700-26

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Basis:

For Washbelt and Dryer emissions, use analytical data for CD in stripped emulsion collected for 1996 Title V calculations and lbs of unstripped emulsion to the finishing lines and WD production for chloroprene (CD) and ACR emissions and AD production for toluene emissions.

Total emissions for the wash belts are covered under 1700-25A, Product Drying Cap.

Assumes full throughput for each drying line.

Calculation basis provided by Mr. P. Offut, DuPont

16.35 % % VOC Emissions from Washbelt =

83.65 % % VOC Emissions from Dryer = Total VOC in Stripped Emulsion = 136416 lbs/vr

113680 lbs/yr in worst emitting product CD in Stripped Emulsion = 22736 lbs/yr in worst emitting product ACR in Stripped Emulsion =

46130 lbs/yr Max. Toluene in Stripped Emulsion =

8760 hours/yr Operating Hours =

Average Emission Rates

Average Emissions = Total in Stripped Emulsion / Operating Hours

Calculate total emissions from the washbelts and dryers

12.98 lbs/hr Average CD Emissions = 2.60 lbs/hr Average ACR Emissions = Average Toluene Emissions = 5.27 lbs/hr

Calculate total emissions from the washbelts

2.12 lbs/hr Average CD Emissions = 18586 lb/yr Average CD Emissions = 9.29 tpy Average CD Emissions =

0.42 lbs/hr Average ACR Emissions = 3717 lb/yr Average ACR Emissions = Average ACR Emissions = 1.86 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: West Wash Belt Dryer

TEMPO ID: EQT0143

Point Source ID No.: 1700-26

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Average Toluene Emissions =

0.86 lbs/hr

Average Toluene Emissions = Average Toluene Emissions =

.7542 lb/yr

3.77 tpy

Maximum Emission Rates

Maximum emission rates are equal to average rates.

Summary

Toluene is potentially emitted at a level of 3.82 tpy, although it is not present in the worst case product.

Therefore, toluene totals are not part of the annual VOC emission totals and are calculated only for reference.

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
]	Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	22304	2.546	2.546	
Chloroprene	18586	2.122	2.122	9.293
Toluene	7542	0.861	0.861	3.771
Total HAPs	26129	2.983	2.983	13.064
Total TAPs	26129	2.983	2.983	13.064



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: East Hot Dryer Exhaust

TEMPO ID: EQT0144

Point Source ID No.: 1700-27 Page 1 of 2

Basis:

For Washbelt and Dryer emissions, use analytical data for CD in stripped emulsion collected for 1996 Title V calculations and lbs of unstripped emulsion to the finishing lines and WD production for chloroprene (CD) and ACR emissions and AD production for toluene emissions.

Total emissions for the dryer exhausts are covered under 1700-27A, Dryer Exhaust Cap.

Assumes full throughput for each drying line.

Calculation basis provided by Mr. P. Offut, DuPont

Based on mass balances, approximately 60 lb/yr of 1,2-dichlorobenzene is emitted from the driers.

% VOC Emissions from Washbelt = 16.35 %

% VOC Emissions from Dryer = 83.65 %
Total VOC in Stripped Emulsion = 136416 lbs/yr

CD in Stripped Emulsion = 113680 lbs/yr in worst emitting product

ACR in Stripped Emulsion = 22736 lbs/yr in worst emitting product

Max. Toluene in Stripped Emulsion = 46130 lbs/yr

Operating Hours = 8760 hours/yr

Average Emission Rates

Average Emissions = Total in Stripped Emulsion / Operating Hours

Calculate total emissions from the washbelts and dryers

Average CD Emissions = 12.98 lbs/hr Average ACR Emissions = 2.60 lbs/hr Average Toluene Emissions = 5.27 lbs/hr

Calculate total emissions from the dryer vents

Average CD Emissions = 10.86 lbs/hr Average CD Emissions = 95093 lb/yr Average CD Emissions = 47.55 tpy

Average ACR Emissions = 2.17 lbs/hr Average ACR Emissions = 19019 lb/yr Average ACR Emissions = 9.51 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: East Hot Dryer Exhaust

TEMPO ID: EQT0144

Point Source ID No.: 1700-27

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Average Toluene Emissions =

4.41 lbs/hr

Average Toluene Emissions =

38588 lb/yr

Average Toluene Emissions =

19.29 tpy

Maximum Emission Rates

Maximum emission rates are equal to average rates.

Summary

Toluene is potentially emitted at a level of 19.54 tpy, although it is not present in the worst case product.

Therefore, toluene totals are not part of the annual VOC emission totals and are calculated only for reference.

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	*
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	114172	13.033	13.033	57.086
Chloroprene	95093	10.855	10.855	47.547
1,2-Dichlorobenze	60	0.007	0.007	0.030
Toluene	38588	4.405	4.405	19.294
Total HAPs	133741	15.267	15.267	66.871
Total TAPs	133741	15.267	15.267	66.871



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: West Hot Dryer Exhaust

TEMPO ID: EQT0145

Point Source ID No.: 1700-28 Page 1 of 2

Basis:

For Washbelt and Dryer emissions, use analytical data for CD in stripped emulsion collected for 1996 Title V calculations and lbs of unstripped emulsion to the finishing lines and WD production for chloroprene (CD) and ACR emissions and AD production for toluene emissions.

Total emissions for the dryer exhausts are covered under 1700-27A, Dryer Exhaust Cap.

Assumes full throughput for each drying line.

Calculation basis provided by Mr. P. Offut, DuPont

Based on mass balances, approximately 60 lb/yr of 1,2-dichlorobenzene is emitted from the driers.

% VOC Emissions from Washbelt = 16.35 %

% VOC Emissions from Dryer = 83.65 %

Total VOC in Stripped Emulsion = 136416 lbs/yr

CD in Stripped Emulsion = 113680 lbs/yr in worst emitting product

ACR in Stripped Emulsion = 22736 lbs/yr in worst emitting product

Max. Toluene in Stripped Emulsion = 46130 lbs/yr
Operating Hours = 8760 hours/yr

Average Emission Rates

Average Emissions = Total in Stripped Emulsion / Operating Hours

Calculate total emissions from the washbelts and dryers

Average CD Emissions = 12.98 lbs/hr Average ACR Emissions = 2.60 lbs/hr Average Toluene Emissions = 5.27 lbs/hr

Calculate total emissions from the dryer vents

Average CD Emissions = 10.86 lbs/hr Average CD Emissions = 95093 lb/yr Average CD Emissions = 47.55 tpy

Average ACR Emissions = 2.17 lbs/hr Average ACR Emissions = 19019 lb/yr Average ACR Emissions = 9.51 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: West Hot Dryer Exhaust

TEMPO ID: EQT0145

Point Source ID No.: 1700-28

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Average Toluene Emissions =

4.41 lbs/hr

Average Toluene Emissions =

38588 lb/yr

Average Toluene Emissions =

19.29 tpy

Maximum Emission Rates

Maximum emission rates are equal to average rates.

Summary

Toluene is potentially emitted at a level of 20.21 tpy, although it is not present in the worst case product.

Therefore, toluene totals are not part of the annual VOC emission totals and are calculated only for reference.

Compound	Total	Average	Maximum	Annual
i	Loss	Emission	Emission	Emissions
İ		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	114172	13.033	13.033	57.086
Chioroprene	95093	10.855	10.855	47.547
1,2-Dichlorobenze	60	0.007	0.007	0.030
Toluene	38588	4.405	4.405	19.294
Total HAPs	133741	15.267	15.267	66.871
Total TAPs	133741	15.267	15.267	66.871



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 1 East Dryer Cooling Compartment

TEMPO ID: EQT0146

Point Source ID No.: 1700-45

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Basis:

Effectively all VOC is expected to be removed in the wash belts and dryers. Therefore, VOC emissions from the cooling compartments are expected to be <0.01 tpy.

Compound	Average	Maximum	Annual Emissions
1	Emission	Emission	ETHISSIONS
,	· Rate	Rate	
	lb/hr	lb/hr	tpy
Total VOC	<0.01	<0.01	<0.01
Chloroprene	<0.01	<0.01	<0.01
Toluene	<0.01	<0.01	<0.01
Total HAPs	<0.01	· <0.01	<0.01
Total TAPs	<0.01	<0.01	<0.01



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 1 West Dryer Cooling Compartment

TEMPO ID: EQT0147

Point Source ID No.: 1700-46

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Basis:

Effectively all VOC is expected to be removed in the wash belts and dryers. Therefore, VOC emissions from the cooling compartments are expected to be <0.01 tpy.

Compound	Average	Maximum	Annual
·	Emission	Emission	Emissions
1	Rate	Rate '	
	lb/hr	lb/hr	tpy
Total VOC	<0.01	<0.01	<0.01
Chloroprene	<0.01	<0.01	<0.01
Toluene	<0.01	<0.01	<0.01
Total HAPs	<0.01	<0.01	<0.01
Total TAPs	<0.01	<0.01	<0.01



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 2 East Dryer Cooling Compartment

TEMPO ID: EQT0148

Point Source ID No.: 1700-47

Page

Basis:

Effectively all VOC is expected to be removed in the wash belts and dryers. Therefore, VOC emissions from the cooling compartments are expected to be <0.01 tpy.

Compound	Average	Maximum	Annual
Compound	Emission	Emission	Emissions
1	Rate	Rate	
	lb/hr	lb/hr	tpy
Total VOC	<0.01	<0.01	<0.01
Chioroprene	<0.01	<0.01	<0.01
Toluene	<0.01	<0.01	<0.01
Total HAPs	<0.01	<0.01	<0.01
Total TAPs	<0.01	<0.01	<0.01



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 2 West Dryer Cooling Compartment

TEMPO ID: EQT0149

Point Source ID No.: 1700-48

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Basis:

Effectively all VOC is expected to be removed in the wash belts and dryers. Therefore, VOC emissions from the cooling compartments are expected to be <0.01 tpy.

Compound	Average	Maximum	Annual
	Emission	Emission	Emissions
	Rate	Rate	
	lb/hr	lb/hr	tpy
Total VOC	<0.01	<0.01	<0.01
Chloroprene	<0.01	<0.01	<0.01
Toluene	<0.01	<0.01	<0.01
Total HAPs	<0.01	<0.01	<0.01
Total TAPs	<0.01	<0.01	<0.01



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Stabilizer Tanks Vent

TEMPO ID: GRP0009

Point Source ID No.: 1700-50

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Basis:

No. 1 Stabilizer Makeup tank is 1070 gallon capacity and used to makeup aqueous dispersion stabilizer which has no VOC emissions.

No. 2 Stabilizer Makeup tank is 1070 gallon capacity and used to makeup any type of stabilizer.

No. 3 and 4 Stabilizer Tanks are 2330 gallon capacity and used to makeup toluene base stabilizer for AD and G types.

No. 3 and 4 Stabilizer Tanks are also used to makeup Emergency Stabilizer for the PK's (about once per quarter).

No. 5 Stabilizer Makeup tank is 1070 gallon capacity and used to makeup dispersion stabilizer which has no VOC emissions but will result in particulate emissions from the manhole vent..

Toluene is used for stabilizers for A-types, G-types, and emergency stabilizer.

Each of the 5 tanks is equipped with a nitrogen blanket regulator set at 1 psig.

All 5 tanks are piped to two common vent systems.

One vent system is equipped with a flame arrestor and vents to atmosphere during preparation of the stabilizers.

The second vent system is equipped with a backpressure regulator set at 2 psig and operates after stabilizer preparation.

The five PK stabilizer tanks are vented back to the second vent system to minimize emissions. Since during operation, the PK stabilizer tanks vent back to the stabilizer makeup tanks there are no emissions when transferring from the makeup tanks to the PK stabilizer tanks.

Solid additives are added to the toluene based and aqueous dispersion stabilizers, resulting in particulate matter emissions.

When the manhole is open for solids addition, toluene vapors and particulates are captured by the manhole exhaust system (EID No.1700-14B).

Calculation basis provided by Mr. P. Offut, DuPont Performance Polymers.

502 lb/batch Maximum Makeup Toluene = 35 C Temperature = 46.77 mm Hg Toluene Vapor Pressure = Toluene Liquid Density = 53.21 lbs/ft3 42.00 mm Hg H2O Vapor Pressure = 832 lbs/min Toluene Flow Rate = 15.64 ft3/min Toluene Flow Rate = 15.64 ft3/min Vapor Displacement = 2915575 lb Maximum Toluene Required = 54792 ft3/yr Maximum Toluene Required = 3504 min/yr Venting Time = 58.40 hr/yr Venting Time =



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Stabilizer Tanks Vent

TEMPO ID: GRP0009

Point Source ID No.: 1700-50

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VOC Emissions

Displacement Losses

Assuming worst case - vapor is saturated with toluene and H2O - and using the ideal gas law

Total Vapor = 0.002468 moles/ft3

Toluene Vapor = 0.000152 moles/ft3

Toluene Vapor = 0.014033 lbs toluene/ft3 total vapor

TolueneVapor = 0.219419 lbs toluene/min

H2O Vapor = 0.000136 moles/ft3

H2O Vapor = 0.002455 lbs H2O/ft3 total vapor

H2O Vapor = 0.038382 lbs H2O/min N2 Vapor = 0.002180 moles/ft3

N2 Vapor = 0.061027 lbs N2/ft3 total vapor

Venting from Stabilizer Tanks

Toluene Vapor = 0.22 lb/min
Toluene Vapor = 769 lbs/yr
Toluene Vapor = 13.17 lb/hr
H2O Vapor = 135 lbs/yr
N2 Vapor = 3344 lbs/yr

Type Change Emissions

When a G or AD campaign is complete, the toluene based stabilizer tank is depressured, the heel is drained to drums, and the tank is cleaned.

For the worst case, assume each type change of G type requires tank cleaning, the tank is at 2 psig, and the nitrogen is is saturated with toluene and water, and the entire volume of the tank is discharged to atmosphere.

Assume depressuring occurs within 1 minute.



RTP Environmental Associates, Inc. Kenner, Louisiana

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Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Stabilizer Tanks Vent

TEMPO ID: GRP0009

G or AD -type changes/yr =

Point Source ID No.: 1700-50

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1 min/type change

Volume of No. 3 or 4 Tank = 311 ft3

Venting Time =

Total Volume Vented = 623 ft3 @ 2psig
Total Volume Vented = 708 ft3 @ 0 psig

Toluene Vented = 367 lbs/yr
Toluene Vented = 9.93 lb/min
Toluene Vented = 595.89 lb/hr

Compound	Total	Average	Maximum	Annual
3	Loss	Emission	Emission	Emissions
	lb/vr	Rate lb/hr	Rate lb/hr	tpy
Toluene	1136	19.253	595.885	
Total HAPs	1136	19.253	595.885	0.568
Total TAPs	1136	19.253	595.885	0.568



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Inhibitor Mix Tank

TEMPO ID: EQT0162

Point Source ID No.: 1700-51

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Basis:

Inhibitor is made by dissolving PTZ and NDPA in Crude CD

The aim limits are 0.75% PTZ and 0.25% NDPA

Inhibitor is produced in the Inhibitor Makeup Tank (IMUT) located in Poly Building

The batches are pumped to the Final Makeup Tank (FMUT), which is covered under EID No.

1700-63, Vent Header System.

Calculation basis provided by Mr. P. Offut, DuPont

CD Supply Rate = 75 lbs/min

Amount of Inhibitor Produced = 4828384 lbs/yr

Temperature = 1.0 C

Specific Gravity of Inhibitor = 61.655 lbs/ft3

Vapor Pressure of CD = 84.06 mm Hg

Molecular Weight of CD = 88.54 lb/lb-mole

Max. Mole Fraction CD = 1.0 mole/mole

Emission Rates

IMUT Tank data

Total Volume of Tank = 88 ft3
Crude CD in tank at 85% level = 3384 lbs
Crude CD in tank at 85% level = 55 ft3
Vapor space in tank at 85% level = 33 ft3

Tank Charging Time = 63565 min/yr
Tank Charging Rate = 1.22 ft3/min

Number of Sub Batches = 1427 sub batches/yr

Amount of CD per Sub Batch = 3384 lbs CD/sub batch pumped
Amount of CD per Sub Batch = 55 ft3 CD/sub batch pumped

Nitrogen supply pressure is controlled at 8 inwg and vent backpressure at 14 inwg.

N2 Supply to Vent = 0.2890 psig

Backpressure Vent Valve Setting = 0.5058 psig



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Inhibitor Mix Tank

TEMPO ID: EQT0162

Point Source ID No.: 1700-51

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For CD saturated nitrogen at 1 C and using the ideal gas law,

Total Vapor = 0.00286909 moles/ft3 CD Vapor = 0.00030676 moles/ft3

CD Vapor = 0.02716085 lbs CD/ft3 total vapor

Total Amount Vented = 55 ft3/sub batch pumped

Venting Rate = 1.22 ft3/min
CD Venting Rate = 0.03 lb/min
CD Venting Rate = 1.99 lb/hr

CD vented = 1.49 lbs CD/sub batch

CD vented = 2127 lbs CD/yr CD vented = 1.06 tons CD/yr

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
	lb/yr	Rate lb/hr	Rate lb/hr	tpy
Chloroprene	2127	1.988	1.988	1.064
Total HAPs	2127	1.988	1.988	1.064
Total TAPs	2127	1.988	1.988	1.064



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Unstripped Storage Tanks Manual Vent

TEMPO ID: RLP0016

Point Source ID No.: 1700-56 Page 1 of 3

Basis:

Unstripped emulsion tanks 6, 7, 8, 10, 13, and 14 are normally vented to the pressure balancing common vent header / tank system.

To prevent backflow to other tanks resulting from venting down during product changes, the tanks are isolated from the common vent system and directed to a bypass vent to atmosphere.

Tanks 6, 7, 8, and 10 store dry type emulsions.

Tanks 13 and 14 store liquid type products.

Venting time is approximately 1 minute.

Vapor pressure of chloroprene (CD) is based on worst case product.

Calculation basis provided by Mr. P. Offut, DuPont

Number of Vent Downs = 25 vent downs/yr/tank for dry types

Number of Vent Downs = 50 vent downs/yr/tank for LD types

EST 10 Total Volume = 2400 ft3 EST 7 or 8 Total Volume = 2025 ft3

EST 6, 13, or 14 Total Volume = 2025 its
EST 6, 13, or 14 Total Volume = 1545 ft3

Maximum Pressure = 5 psig

Molecular Weight of CD = 88.54 lb/lb-mole

Molecular Weight of Toluene = 92.14 lb/lb-mole
Molecular Weight of ACR = 122.99 lb/lb-mole

Temperature = 25 °C

Atmospheric Pressure = 25 C 14.696 psia

Average Emission Rates

Calculate vented volume

No. 10 Vented Volume = 817 ft3/vent down from 5 psig to 0 psig No. 7 or 8 Vented Volume = 689 ft3/vent down from 5 psig to 0 psig

No. 6, 13 or 14 Vented Volume= 526 ft3/vent down from 5 psig to 0 psig



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Unstripped Storage Tanks Manual Vent

TEMPO ID: RLP0016

Vapor Pressure of Water =

Point Source ID No.: 1700-56

Page

Using worst case of nitrogen saturated with H2O, toluene, ACR and Slocum CD data

Total Vapor = 0.002550 moles/ft3

Vapor Pressure of CD = 189 mm Ha

> CD Vapor = 0.000473 moles/ft3

CD Vapor = 0.041902 lbs CD/ft3 total vapor

23.6 mm Hg

Vapor Pressure of Toluene = 28.40 mm Hg

> Toluene Vapor = 0.000071 moles/ft3

Toluene Vapor = 0.006553 lbs toluene/ft3 total vapor

Vapor Pressure of ACR = 42.28 mm Hg

> ACR Vapor = 0.000106 moles/ft3

ACR Vapor = 0.013020 lbs ACR/ft3 total vapor

H2O Vapor = 0.000079 moles/ft3

H2O Vapor = 0.001426 lbs H2O/ft3 total vapor

Nitrogen Vapor = 0.001998 moles/ft3

Nitrogen Vapor = 0.057943 lbs N2/ft3 total vapor

No. 10 EST Vapor Vented = 20414 ft3/yr

No. 10 EST CD Vented = 855 lb/yr

No. 10 EST Toluene Vented = 134 lb/yr

No. 10 EST ACR Vented = 266 lb/yr

No. 7 or 8 EST Vapor Vented = 17224 ft3/yr

No. 7 or 8 EST CD Vented = 722 lb/yr

No. 7 or 8 EST Toluene Vented = 113 lb/yr

No. 7 or 8 EST ACR Vented = 224 lb/yr

No 6 EST Vapor Vented = 13141 ft3/yr

No 6 EST CD Vented = 551 lb/yr

No 6 EST Toluene Vented = 86 lb/yr

No 6 EST ACR Vented =

171 lb/yr

No. 13 & 14 EST Vapor Vented = 52565 ft3 CD/yr

No. 13 & 14 EST CD Vented = 2203 lb/yr

No. 13 & 14 EST Toluene Vented = 344 lb/yr

No. 13 & 14 EST ACR Vented = 684 lb/yr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Unstripped Storage Tanks Manual Vent

TEMPO ID: RLP0016

Point Source ID No.: 1700-56 Page 3 of C

Total CD Emitted = 4330 !b/yr
Total Toluene Emitted = 677 !b/yr
Total ACR Emitted = 1346 !b/yr

Venting Time Per Event = 1 min
Average CD Emission Rate = 1484.69 lb/hr
Average Toluene Emission Rate = 232.18 lb/hr
Average ACR Emission Rate = 461.32 lb/hr

Maximum Emission Rates

Maximum emission rates are equal to the average rates.

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
	lb/yr	Rate lb/hr	Rate lb/hr	tpy
Chloroprene	4330	1484.685	1484.685	2.165
Toluene	677	232.181	232.181	0.339
Total HAPs	5008	1716.866	1716.866	2.504
Total TAPs	5008	1716.866	1716.866	2.504



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: 1712 Building Common Vent Header System

TEMPO ID: GRP0010

Point Source ID No.: 1700-63 Page 1 of 4

Basis:

The Refined CD Storage Tank, No. 3 Crude CD Storage Tank, CD Inhibitor FMUT, CD Inhibitor HUT, No 1 and No. 2 RCD tanks, CD Refining Column Heels tank, and No. 1 and No. 2 Monomer Solution Tanks all vent into a common vent header, which minimizes emissions as one tank or another fills, venting into the other tanks.

Actual operating data of the common vent system for the past two years show that under normal operating conditions, the system vents very little to none.

Emissions are calculated by estimating and summing up the time for abnormal operations where tank levels will vary significantly and Poly can keep running.

It is conservatively estimated that operating conditions will result in emissions for 10% of the year in addition to maintenance requirements.

Calculation basis provided by Mr. P. Offut, DuPont

Based on mass balances, approximately 2 lb/yr of 1,2-dichlorobenzene is emitted from the Column Heels Tank.

Crude CD Specific Gravity = 60.924 lbs/ft3 Refined CD Pumped = 139871804 lb/yr considering worst case product Recovered CD Pumped = 50529656 lb/yr considering worst case product Vapor Temperature = 5 C Vapor Temperature = 501 R Header Inlet Pressure = 4.5 psig Header Inlet Pressure = 19.196 psia Header Outlet Pressure = 0 psig Header Outlet Pressure = 14.696 psia Gas Cv for Valve (100% open) = 816 Cg/Cv Gas/Liquid Cv for Valve = 36.1 Vapor Pressure of CD = 100.671 mm Hg Molecular Weight of CD = 88.54 lb/lb-mole Max. Mole Fraction CD = 1 mole/mole Vapor Pressure of Toluene = 9.189 mm Ha Molecular Weight of Toluene = 92.14 lb/lb-mole Max. Mole Fraction Toluene = 0.036 mole/mole Vapor Pressure of ACR = 15.538 mm Hg Molecular Weight of ACR = 122.99 lb/lb-mole Max. Mole Fraction ACR = 0.009 mole/mole 6679 hr considering worst case product Operating Time = Unschd Column Maint Down Days = 5 /yr Column Water Washes = 9 Arr Other Venting = 668 hrs/yr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: 1712 Building Common Vent Header System

TEMPO ID: GRP0010

Point Source ID No.: 1700-63

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Emission Rates

Estimate transfer rates

Total Crude CD Pumped =

95296213 lbs/yr

Hours Flow =

6679 hr

Based on the common vent header design, maximum flow occurs with the backpressure valve fully open and a differential pressure of 4.5 psig and temperature of 5 C Conservatively, assuming nitrogen saturated with CD at 1 C liquid temperature and using the ideal gas law,

Total vapor = 0.001284 moles/ft3 CD vapor = 0.000130 moles/ft3

CD vapor = 0.011525 lbs CD/ft3 total vapor @ 5 psig

CD vapor = 0.008823 lbs CD/ft3 total vapor @ 0 psig

Toluene vapor = 0.000000 moles/ft3

Toluene vapor = 0.000022 lbs toluene/ft3 total vapor @ 5 psig
Toluene vapor = 0.000017 lbs toluene/ft3 total vapor @ 0 psig

ACR vapor = 0.000000 moles/ft3

ACR vapor = 0.000021 lbs ACR/ft3 total vapor @ 5 psig ACR vapor = 0.000016 lbs ACR/ft3 total vapor @ 0 psig

Q = $((520 / (1.18 \times \text{Temp}))^{0.5}) \times (\text{Gas Cv x Inlet Pressure}) \times \text{SIN}((\pi/180) \times (3417/\text{Gas/Liquid Cv}) \times (((\text{Inlet Pressure-Outlet Pressure})/\text{Inlet Pressure})^{0.5}))/60$

Gas Flow =

176 scfm with 100% valve open



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: 1712 Building Common Vent Header System

TEMPO ID: GRP0010

Point Source ID No.: 1700-63 Page 3 of 4

Equal percentage valve flow characteristics

			•			
% open	% full flow	scfm	lbs/hr CD	lbs/hr tol	lbs/hr ACR	lbs/hr VOC
100	100	186	98.46	0.19	0.18	98.83
90	86	160	84.59	0.16	0.15	84.91
80	65	121	63.95	0.12	0.12	64.19
70	43	81	42.80	0.08	0.08	42.96
60	29	54	28.59	0.06	0.05	28.70
50	19	36	19.12	0.04	0.03	19.19
40	13	25	13.20	0.03	0.02	13.25
30	9	17	8.80	0.02	0.02	8.83
20	6	11	5.92	0.01	0.01	5.94
10	4	8	4.06	0.01	0.01	4.08

5 Unschd Column Maint Down Days per Year = 120 hrs/yr 9 Column Water Washes per Year = 216 hrs/yr Other Venting = 668 hrs/yr Total = 1004 hrs/yr

For column down time, assume that Poly continues to run at average rates from the refined CD tank and that refill of the refined tank results in the venting. To be conservative, do not back out amount that would be compressed.

Also assume that during these outages the strippers continue to run at average rate and RCD results in venting. To be conservative, do not back out amount that would be compressed.

21024018 lbs/yr Amount Refined CD to Refill = 7595072 lbs/yr Amount RCD Displacing Vapor = Total Displacement = 28619090 lbs/yr Total Displacement = 469751 ft3/yr vapor 7.80 ft3/min vapor Total Displacement = 5414 lbs/vr CD Total CD = Total CD = 5.39 lbs/hr CD Total Toluene = 10 lbs/yr toluene

Total Toluene = 10 lbs/yr toluene

Total Toluene = 0.01 lbs/hr toluene

Total ACR = 10 lbs/yr ACR

Total ACR = 0.01 lbs/hr ACR



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

· Source Description: 1712 Building Common Vent Header System

TEMPO ID: GRP0010

Point Source ID No.: 1700-63

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Compound	Total	Average	Maximum	Annual
<u> </u>	Loss	Emission	Emission	Emissions
		Rate	Rate	
	· lb/yr	lb/hr	lb/hr	tpy
Total VOC	5434	5.413	98.834	2.717
Chloroprene	5414	5.393	98.465	2.707
1,2-Dichlorobenze	2	0.003	0.055	0.001
Toluene	10	0.010	0.190	0.005
Total HAPs	5426	5.406	98.709	2.713
Total TAPs	5426	5.406	98.709	2.713



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Water Solution Exhaust Fan

TEMPO ID: EQT0183

Point Source ID No.: 1700-64 Page 1 of 4

Basis:

Based on 10 hr TWA area data developed between 1999 and 2001, the average concentration of CD in the building air is 0.56 ppmv.

Monitoring data for toluene between February 2001 and September 2002 indicate an average concentration of 0.176 ppm.

3500 lb/yr of dextrose, 203 M lb/yr of sodium sulfite, 4665 lb sodium chloride are added manually from cartons and bags to water solution makeup tank.

Estimated that 0.1% of the material transferred becomes airborne.

Estimated that 50% of the airborne dust is captured by exhaust system. Remainder is captured in building.

Calculation basis provided by Mr. P. Offut, DuPont

Rated Capacity of Blower = 2500 cfm

Amount of Time Discharging = 8760 hours/yr

Average CD in Air Exhausted = 0.56 ppm CD by volume

Maximum CD in Air Exhausted = 0.67 ppm CD by volume

Avg. Toluene in Air Exhausted = 0.176 ppm toluene by volume

Max. Toluene in Air Exhausted = 3.1464 ppm toluene by volume

Molecular Weight of CD = 88.54 lb/lb-mole

Molecular Weight of Toluene = 92.4 lb/lb-mole

rular Weight of Toluene = 92.4 lb/lb-r Temperature = 25 °C

Pressure = 14.696 psia
Dextrose used = 3500 lb/yr
Sodium Sulfite used = 203,000 lb/yr
Sodium Chloride used = 4665 lb/yr

Total Addition Time = 66 hours

Average Emission Rates

Chloroprene

Using given information,

Average CD Emissions = 0.0014 cfm CD



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Water Solution Exhaust Fan

TEMPO ID: EQT0183

Point Source ID No.: 1700-64

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Using the Ideal Gas Law,

Average CD Emissions = 0.000004 moles/minute

Average CD Emissions = 0.000316 lbs/minute

Average CD Emissions = 0.019 lbs/hour

Average CD Emissions = 166 lbs/yr Average CD Emissions = 0.08 tons/yr

Toluene

Using given information,

Average Toluene Emissions = 0.0004 cfm toluene

Using the Ideal Gas Law,

Average Toluene Emissions = 0.000001 moles/minute
Average Toluene Emissions = 0.000104 lbs/minute
Average Toluene Emissions = 0.006 lbs/hour
Average Toluene Emissions = 55 lbs/yr
Average Toluene Emissions = 0.003 tons/yr

Maximum Emission Rates

Chloroprene

Using given information,

Maximum CD Emissions = 0.0017 cfm CD

Using the Ideal Gas Law,

Maximum CD Emissions = 0.000004 moles CD/minute

Maximum CD Emissions = 0.000379 lbs CD/minute

Maximum CD Emissions = 0.023 lbs CD/hour



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Water Solution Exhaust Fan

TEMPO ID: EQT0183

Point Source ID No.: 1700-64

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Toluene

Using given information,

Maximum Toluene Emissions =

0.0079 cfm toluene

Using the Ideal Gas Law,

Maximum Toluene Emissions = 0.000020 moles/minute

Maximum Toluene Emissions =

0.001854 lbs/minute

Maximum Toluene Emissions =

0.111 lbs/hour

PM/PM-10 Emissions

Fraction Airborne =

0.1 %

Capture Efficiency =

50 %

PM/PM-10 Emissions = Process rate, lb/yr x Fraction Airborne x Capture Effiency / 8760 hr/yr

= 211165 lb/yr x 0.1% x 50% / 8760 hr/yr

0.0121 lb/hr

0.05 tpy

Maximum Emission Rates

Fraction Airborne =

0.1 %

Capture Efficiency =

50 %

PM/PM-10 Emissions = Process rate, lb/yr x Fraction Airborne x Capture Effiency /40 hr/yr

= 211165 lb/yr x 0.1% x 50% / 66 hr/yr

1.564 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Water Solution Exhaust Fan

TEMPO ID: EQT0183

Point Source ID No.: 1700-64

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Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
PM/PM-10	106	0.0121	1.564	0.053
Total VOC	221	0.025	0.134	0.110
Chloroprene	166	0.019	0.023	0.083
Toluene	55	0.006	0.111	0.027
Total HAPs	221	0.025	0.134	0.110
Total TAPs	221	0.025	0.134	0.110



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 10 Emulsion Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65 Page 1 . of

Basis:

EST 10 is located outside of the main Poly building. The manway is not ventilated, so any emissions exit to atmosphere from the manway.

Emissions occur when the tank is opened for cleaning or maintenance.

EST 10 is a dry type unstripped emulsion storage tank, which is opened for inspection at every product type change, assume 4 non-compatile type changes / month. This tank requires cleaning once monthly, generally after G campaigns. Inspections last 15 minutes.

When manways opened for inspection, tanks are already vented down via point source

1700-56. Manway will be open for perhaps 15 minutes while tank wall condition is observed for fouling

Assume 1% of tank vapor content is emitted through convection to atmosphere during inspection, since there is no motive force to displace vapor from inside the tank

When vessel entry is required to these tanks for cleaning, an air mover is used to evacuate the vapor contents of the tank, replacing it with an air atmosphere. This can take up to 6 hours.

Calculation basis provided by Mr. D. McCrea DuPont

Formerly under EID No. 1700-1 (EQT0134).

Volume EST 10 = 2400 cub ft
Ambient temperature = 25 deg C
Pressure = 14.696 psia

Pressure = 14.096 psia

For worst case scenarios, assuming equilibrium in tank before emptying. ACR and toluene not present in > 80% time, but counted as if they were.

Using the Ideal Gas Law, Loss during inspections of EST 10

Vapor content of EST 10 = 6.121 lb moles

EST 10 vapor density = 0.0026 lb moles / cub ft

Inspection of EST 10 = 36 per year Loss to atmosphere = 0.061 lb moles

CD in vapor lost = 0.01522 lb moles per inspection
CD in vapor lost = 1.3478 lb per inspection

CD lost during inspections = 48.521 lb / year

Toluene in vapor lost = 0.00229 lb moles per inspection Toluene in vapor lost = 0.2114 lb per inspection

Toluene lost during inspections = 7.609 lb / year



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 10 Emulsion Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65 Page 2 of 3

ACR in vapor lost = 0.00341 lb moles per inspection ACR in vapor lost = 0.4188 lb per inspection

ACR lost during inspections = 20.320 lb / year

Loss during vessel entry to EST 10

CD in vapor lost = 1.522 lb moles per vessel entry
CD in vapor lost = 134.780 lb per vessel entry

CD lost during vessel entries = 1617 lb / year

Toluene in vapor lost = 0.22875 lb moles per vessel entry
Toluene in vapor lost = 21.137 lb per vessel entry

Toluene lost during inspections = 254 lb / year

ACR in vapor lost = 0.34051 lb moles per vessel entry
ACR in vapor lost = 41.8789 lb per vessel entry

ACR lost during inspections = 503 lb / year

Maximum Emission Rates

Maximum emission rate occurs at the start of tank evaculation using the air mover. Emissions will be at the concentration within the tanks.

Coppus blower capacity 750 cfm CD emission in first minute 42.119 lb/min

assuming no air leakage in occurs in that first minute.

Toluene emission in first minute 6.605 lb/min ACR emission in first minute 13.087 lb/min

Maximum CD Emissions = 42.119 lb/min
Maximum toluene Emissions = 6.605 lb/min
Maximum ACR Emissions = 13.087 lb/min



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 10 Emulsion Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65

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Compound	Total	Average	Maximum	Annual
'	Loss	Emission	Emission	Emissions
	ł	Rate	Rate	
,	lb/yr	. ib/hr	lb/hr	tpy
Total VOC	2450	30.247	4097.575	1.225
Chloroprene	1666	20.566	2527.117	0.833
Toluene	261	3.225	785.229	0.131
Total HAPs	1927	23.792	3312.346	0.964
Total TAPs	1927	23.792	3312.346	0.964



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 13 Emulsion Storage Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65A

Basis:

EST 13 is located outside of the main Poly building. The manway is not ventilated, so any emissions exit to atmosphere from the manway.

Emissions occur when the tanks are opened for cleaning or maintenance.

EST 13 and 14 are Liquid Dispersion unstripped emulsion storage tanks. These tanks are opened for inspection occasionally, assume once every two months. These tanks require occasional cleaning, assume once every 3 months.

When manways opened for inspection, tanks are already vented down via point source 1700-56. Manway will be open for perhaps 10 minutes while tank wall condition is observed for fouling Assume 1% of tank vapor content is emitted through convection to atmosphere during inspection, since thre is no motive force to displace vapor from inside the tank When vessel entry is required to these tanks for cleaning, an air mover is used to evacuate the vapor

contents of the tank, replacing it with an air atmosphere. This can take up to 6 hours.

Calculation basis provided by Mr. D. McCrea DuPont

Formerly under EID No. 1700-1 (EQT0134).

cub ft Volume EST 13 and 14 = 1545 Ambient temperature = 25 deg C

> 14.696 psia Pressure =

For worst case scenarios, assuming equilibrium in tank before emptying. ACR and toluene not present in > 80% time, but counted as if they were.

Loss during inspections of EST 13

Vapor content of EST 13 or 14 = 3.941 lb moles

EST 13 or 14 vapor density = 0.0026 Ib moles / cub ft

8 per year Inspection of EST 13 & 14 = Loss to atmosphere = 0.039 Ib moles 0.97995 Ib moles CD in vapor lost =

CD in vapor lost = 86,7644 lb

CD lost during inspections = 694.115 lb / year

Toluene in vapor lost = 0.00147 lb moles 0.1361 Toluene in vapor lost = lb .

Toluene lost during inspections = 1.089 lb / year



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 13 Emulsion Storage Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65A Page 2 of 3

ACR in vapor lost = 0.00219 lb moles per inspection ACR in vapor lost = 0.2696 lb per inspection

ACR lost during inspections = 2.157 lb / year

Loss during vessel entry to EST 13

CD in vapor lost = 0.980 lb moles per vessel entry
CD in vapor lost = 86.764 lb per vessel entry

CD lost during vessel entries = .347.06 lb / year

Toluene in vapor lost = 0.14726 lb moles per vessel entry
Toluene in vapor lost = 13.607 lb per vessel entry

Toluene lost during inspections = 54.43 lb / year

ACR in vapor lost = 0.21920 lb moles per vessel entry ACR in vapor lost = 26.9595 lb per vessel entry

ACR lost during inspections = 107.84 lb / year

Maximum Emission Rates

Maximum emission rate occurs at the start of tank evaculation using the air mover. Emissions will be at the concentration within the tanks.

Coppus blower capacity 750 cfm
CD emission in first minute 42.119 lb/min

assuming no air leakage in occurs in that first minute.

Toluene emission in first minute 6.605 lb/min ACR emission in first minute 13.087 lb/min

Maximum CD Emissions = 42.119 lb/min
Maximum toluene Emissions = 6.605 lb/min
Maximum ACR Emissions = 13.087 lb/min



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 13 Emulsion Storage Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65A

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Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
	1	Rate	Rate	
ļ	lb/yr	lb/hr	lb/hr	tpy
Total VOC	1207	46.411	4097.575	0.603
Chloroprene	1041	40.045	2527.117	0.521
Toluene	56	2.135	785.229	0.028
Total HAPs	1097	42.180	3312.346	0.548
Total TAPs	1097	42.180	3312.346	0.548



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 14 Emulsion Storage Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65B

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Basis:

EST 14 is located outside of the main Poly building. The manway is not ventilated, so any emissions exit to atmosphere from the manway.

Emissions occur when the tanks are opened for cleaning or maintenance.

EST 13 and 14 are Liquid Dispersion unstripped emulsion storage tanks. These tanks are opened for inspection occasionally, assume once every two months. These tanks require occasional cleaning, assume once every 3 months.

When manways opened for inspection, tanks are already vented down via point source
1700-56. Manway will be open for perhaps 10 minutes while tank wall condition is observed for fouling
Assume 1% of tank vapor content is emitted through convection to atmosphere during
inspection, since thre is no motive force to displace vapor from inside the tank

When vessel entry is required to these tanks for cleaning, an air mover is used to evacuate the vapor contents of the tank, replacing it with an air atmosphere. This can take up to 6 hours.

Calculation basis provided by Mr. D. McCrea DuPont

Formerly under EID No. 1700-1 (EQT0134).

Volume EST 13 and 14 = 1545 cub ft
Ambient temperature = 25 deg C

Pressure = 14.696 psia

For worst case scenarios, assuming equilibrium in tank before emptying. ACR and toluene not present in > 80% time, but counted as if they were.

Loss during inspections of EST 14

Vapor content of EST 13 or 14 = 3.941 lb moles

EST 13 or 14 vapor density = 0.0026 lb moles / cub ft

Inspection of EST 13 & 14 = 8 per year

Loss to atmosphere = 0.039 lb moles

CD in vapor lost = 0.97995 lb moles

CD in vapor lost = 86.7644 lb

CD lost during inspections = 694.115 lb / year

Toluene in vapor lost = 0.00147 lb moles

Toluene in vapor lost = 0.1361 lb

Toluene lost during inspections = 1.089 lb / year



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 14 Emulsion Storage Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65B Page 2 of 3

ACR in vapor lost = 0.00219 lb moles per inspection ACR in vapor lost = 0.2696 lb per inspection

ACR lost during inspections = 2.157 lb / year

Loss during vessel entry to EST 14

CD in vapor lost = 0.980 lb moles per vessel entry
CD in vapor lost = 86.764 lb per vessel entry
CD lost during vessel entries = 347.06 lb / year

Toluene in vapor lost = 0.14726 lb moles per vessel entry

Toluene in vapor lost = 0.14720 lb moles per vessel entry

Toluene lost during inspections = 54.43 lb / year

ACR in vapor lost = 0.21920 lb moles per vessel entry
ACR in vapor lost = 26.9595 lb per vessel entry
ACR lost during inspections = 107.84 lb / year

Maximum Emission Rates

Maximum emission rate occurs at the start of tank evaculation using the air mover. Emissions will be at the concentration within the tanks.

Coppus blower capacity 750 cfm
CD emission in first minute 42.119 lb/min

assuming no air leakage in occurs in that first minute.

Toluene emission in first minute 6.605 lb/min ACR emission in first minute 13.087 lb/min

Maximum CD Emissions = 42.119 lb/min
Maximum toluene Emissions = 6.605 lb/min
Maximum ACR Emissions = 13.087 lb/min



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 14 Emulsion Storage Tank Manway

TEMPO ID:

Point Source ID No.: 1700-65B Page 3 of

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
İ	lb/yr	lb/hr	lb/hr	tpy
Total VOC	1207	46.411	4097.575	0.603
Chloroprene	1041	40.045	2527.117	0.521
Toluene	56	2.135	785.229	0.028
Total HAPs	1097	42.180	3312.346	0.548
Total TAPs	1097	42.180	3312.346	0.548



RTP Environmental Associates, Inc. Kenner. Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Building Wall Fans

TEMPO ID: EQT0185

Point Source ID No.: 1700-66 Page

Basis:

Based on 10 hr TWA area data developed between 1999 and 2001, the average concentration of CD in the building air is 0.56 ppmv.

Monitoring data for toluene between February 2001 and September 2002 indicate an average concentration of 0.176 ppm.

ACR has a vapor pressure similar to that of toluene. Conservatively assume the same concentration in the air.

ACR is present in only 4 out of the 20 Neoprene types manufactured in Poly. Similarly toluene is present in only 6 types Neoprene out of 20

Fans vent fugitive emissions from equipment components located in the building. Calculation basis provided by Mr. P. Offut, DuPont

Rated Capacity of Fans =

Amount of Time Discharging =

Average CD in Air Exhausted =

Maximum CD in Air Exhausted =

Avg. Toluene in Air Exhausted =

Max. Toluene in Air Exhausted = Avg. ACR in Air Exhausted =

Max. ACR in Air Exhausted =

Molecular Weight of CD =

Molecular Weight of Toluene =

Molecular Weight of ACR =

Temperature =

Pressure =

476365 cfm

8760 hours/vr

0.56 ppm CD by volume

0.67 ppm CD by volume

0.176 ppm toluene by volume

3.1464 ppm toluene by volume

0.176 ppm ACR by volume

3,1464 ppm ACR by volume

88.54 lb/lb-mole

92.4 lb/lb-mole

122.99 lb/lb-mole

25 °C

14.696 psia

Average Emission Rates

Chloroprene

Using given information,

Average CD Emissions =

0.2668 cfm CD



RTP Environmental Associates, Inc. Kenner, Louisiana

of

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Building Wall Fans

TEMPO ID: EQT0185

Point Source ID No.: 1700-66 Page 2

Using the Ideal Gas Law,

Average CD Emissions = 0.000680 moles/minute
Average CD Emissions = 0.060241 lbs/minute
Average CD Emissions = 3.614 lbs/hour
Average CD Emissions = 31663 lbs/yr
Average CD Emissions = 15.83 tons/yr

Toluene

Using given information,

Average Toluene Emissions = 0.0838 cfm toluene

Using the Ideal Gas Law,

Average Toluene Emissions = 0.000214 moles/minute
Average Toluene Emissions = 0.019758 lbs/minute
Average Toluene Emissions = 1.185 lbs/hour
Average Toluene Emissions = 10385 lbs/yr
Average Toluene Emissions = 5.19 tons/yr

ACR

Using given information,

Average ACR Emissions = 0.0838 cfm ACR

Using the Ideal Gas Law,

Average ACR Emissions = 0.000214 moles/minute
Average ACR Emissions = 0.026299 lbs/minute
Average ACR Emissions = 1.578 lbs/hour
Average ACR Emissions = 13823 lbs/yr
Average ACR Emissions = 6.91 tons/yr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Building Wall Fans

TEMPO ID: EQT0185

Point Source ID No.: 1700-66 Page

Maximum Emission Rates

Chloroprene

Using given information,

Maximum CD Emissions =

0.3201 cfm CD

Using the Ideal Gas Law,

Maximum CD Emissions = Maximum CD Emissions = 0.000816 moles CD/minute 0.072289 lbs CD/minute 4.337 lbs CD/hour

Maximum CD Emissions =

Toluene

Using given information,

Maximum Toluene Emissions =

1.4988 cfm toluene

Using the Ideal Gas Law, 1

· Maximum Toluene Emissions = Maximum Toluene Emissions =

0.353225 lbs/minute

Maximum Toluene Emissions =

21.193 lbs/hour

0.003823 moles/minute

ACR

Using given information,

Maximum ACR Emissions =

1,4988 cfm ACR

Using the Ideal Gas Law,

Maximum ACR Emissions =

0.003823 moles/minute

Maximum ACR Emissions = Maximum ACR Emissions = 0.470163 lbs/minute 28.210 lbs/hour



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Poly Building Wall Fans

TEMPO ID: EQT0185
Point Source ID No.: 1700-66

Page

Compound	Total	Average	Maximum	Annual Emissions	
	Loss	Emission	Emission		
		Rate	Rate		
	lb/yr	lb/hr	lb/hr	tpy	
Total VOC	55871	6.378	53.741	27.935	
Chloroprene	31663	3.614	4.337	15.831	
Toluene	10385	1.185	21.193	5.192	
Total HAPs	42048	4.800	25.531	21.024	
Total TAPs	42048	4.800	25.531	21.024	



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Finishing Stabilizer Makeup Bag Filter

TEMPO ID: EQT0193

Point Source ID No.: 1700-74

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Basis:

Keltrol Used =

2521 lb/yr

TETD Used =

150219 lb/yr

Lomar PW =

10212 lb/yr

Total Addition Time =

88 hours

Keltrol, TETD, and Lomar are added manually from bags to finishing stabilizer makeup tanks into an aqueous suspension.

Estimated that 0.25% of the material transferred becomes airborne. This is based on experience with the bag filter, which is almost clean when inspected annually.

Estimated that 50% of the airborne dust is captured by exhaust system. Remainder is captured in building.

Emissions are controlled by a bag filter with 99% control efficiency.

Calculation basis provided by Mr. D.McCrea, DuPont

PM/PM-10 Emissions

Fraction Airborne =

0.25 %

Capture Efficiency =

50 %

Control Efficiency =

99 %

PM/PM-10 Emissions = Process rate, lb/yr x Fraction Airborne x Capture Effiency

x (1 - Control Efficiency) / 214 hr/yr

= 162952 lb/yr x 0.25% x 50% x (1 - 0.99) / 88 hr/yr

= 0.0231 lb/hr

= 0.00 tpy

Compound	Total	Average	Maximum	Annual
'	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
PM/PM-10	2.04	0.023	0.023	0.001



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Emergency Stabilizer Drumming

TEMPO ID: EQT0198

Point Source ID No.: 1700-79 Page 1 of 2

Basis:

Emergency stabilizer is produced 4 times per year.

Emergency stabilizer is drummed out from the stablizer makeup tank.

Emissions are not controlled.

Assume that vapor displaced is saturated with VOC.

Emergency stabilizer is composed of toluene, water and dissolved inhibitors.

Calculation basis provided by Mr. P. Offut, DuPont

Drumming Rate = 5 gal/min

Drumming Rate = 0.6685 cfm

Stabilizer Drummed = 20400 lb

Density of Emergency Stabilizer = 7.64 lb/gal

Volume of Drum = 55 gal

Temperature = 25 C

Vapor Pressure of Toluene = 28.40 mm Hg
Molecular Weight of Toluene = 92.4 lb/lb-mole

Emission Rates

Drumming Time = 534.03 min

Using the Ideal Gas Law,

Total Vapor = 0.002550 moles/ft3

Toluene Vapor = 0.000095 moles/ft3

Toluene Vapor = 0.008807 lbs toluene/ft3 total vapor

Toluene Vapor = 0.005887 lbs toluene/min

Toluene Vapor = 0.353250 lb/hr Toluene Vapor = 3.14 lb/yr

Toluene Vapor = 0.002 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Emergency Stabilizer Drumming

TEMPO ID: EQT0198

Point Source ID No.: 1700-79 Page 2 of 2

Compound	Total	Average	Maximum	Annual
j	Loss	Emission	Emission	Emissions.
	1	Rate	. Rate	
	lb/yr	ib/hr	lb/hr	tpy
Total VOC	3.1	0.353	0.353	0.002
Toluene	3.1	0.353	0.353	0.002
Total HAPs	3.1	0.353	0.353	0.002
Total TAPs	3.1	0.353	0.353	0.002



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR Storage Common Vent Header

TEMPO ID: RLP0017

Point Source ID No.: 1700-80

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Basis:

Emissions are the total from the Refined ACR Storage Tank (1700-80.1/EQT0199) and Chlorinated ACR Storage Tank (1700-80.2/EQT0200).

Compound	ompound Total		Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	İ
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	198	0.023	-	0.099
1,2-Dichlorobenze	0.11	0.00001		0.00005
Total HAPs	0.11	0.00001	-	0.00005
Total TAPs	0.11	0.00001	•	0.00005



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Refined ACR Storage Tank

TEMPO ID: EQT0199

Point Source ID No.: 1700-80.1

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Basis:

Refined ACR from the ACR Refining Column is pumped into the Refined ACR storage tank. The Refined ACR Storage Tank has an external -18 C brine cooled heat exchanger. The circulating flow from the tank goes to the SMU are to feed the MST and returns to the tank via the cooler. The ACR storage tank is 45,000 gal in size, but the capacity is limited to 172,600 lb by Neovent considerations.

The tank is nitrogen blanketed.

Refined ACR is withdrawn from the ACR supply loop in Poly batchwise at the MST.

The Refined and Chlorinated ACR Storage tanks share a common ven header, but the ACR-solvent blend tank has a separate vent to avoid possible solvent contamination of the Refined ACR Storage Tank.

All inlet streams of ACR tanks enter through droplegs.

The vent stack for the ACR Storage Tank is to be 2° in diameter and approximately 50 ft above grade.

ACR Produced = 2959863 lb/yr

Max Fill Tank = 667 lb/hr

Tank Volume = 45000 gal

Max. Liquid Level in Refined ACR Tank = 17370 gal

Tank Temperature = -10.00 C

263.15 K

Tank Pressure = 6 psig

= 20.7 psia

= 1070.20 mm Hg

s.g. of ACR at Specified Temp = 1.2



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Refined ACR Storage Tank

TEMPO ID: EQT0199

Point Source ID No.: 1700-80.1

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Emission Rates

Use the working loss equation from Section 7.1.3.1.2 of AP-42, 5th Edition.

 L_W , Working Loss, lb/yr = 0.001 * M_V * P_{VA} * (Q / 42) * K_N * K_P

M_V = vapor molecular weight, lb/lb-mol

= 123.02 lb/lb-mole

P_{VA} = vapor pressure at daily average liquid surface temperature, psia

= 0.1250 psia

Q = throughput, gal/yr

295785 gal/yr

Max Level = 173818 lb

N = number of turnovers

= 295785 gal/yr / 17370 gal

= 17.03

 K_N = turnover factor

= 1 for N <= 36

= (180+N) / 6N for N > 36

=

K_P = working loss product factor

1 for all liquids except crude oil



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Refined ACR Storage Tank

TEMPO ID: EQT0199

Point Source ID No.: 1700-80.1 Page 3 of

Component	Wt %	Mol Wt	Wt%/MW	Mole	Vapor	Partial
·	in liquid			Fraction	Pressure	Pressure
	'			in Liquid	(mm Hg)	(mm Hg)
ACR	0.935	122.99	0.760	0.9397	6.66	6.2553
ACR-1	0.046	122.99	0.037	0.0462	4.27	0.1976
ACR-2	0.002	122.99	0.002	0.0020	2.84	0.0057
ACR-3	0.002	122.99	0.002	0.0020	1.89	0.0038
T-1,4 DCB	0	125	0	0.0000	0.01	0
TCB-1	0	159.5	0	0.0000	0.30	0
TCB-2	0	159.5	0.000	0.0000	0.05	0.0000
Meso	0	196	0.000	0.0000	0.03	0.0000
C4Cl4	0.01	196	0.005	0.0063	0.03	0.0002
C4CI5	0	230.5	0	0.0000	0.03	0
C4Cl6	0	265	Ō	0.0000	0.03	0
1,2-DCB	0.005	166.00	0.003	0.0037	1.11	0.0041
NMP	0	85.1	0	0.0000	0.00	0
•	1.000		0.809	1		6.4667

Component	Partial	Mole	Mol Weight	Avg. Hourly	Max. Hourly	Annual
•	Pressure	Fraction	of Vapor	Emissions	Emissions	Emissions
	(psia)	in Vapor	lb/lb-mol	lb/hr	lb/hr	lb/yr
ACR	0.12096	0.005845	118.97	0.012	0.026	104.793
ACR-1	0.00382	0.000185	3.76	0.0004	0.001	3.310
ACR-2	0.00011	0.000005	0.11	0.0000	0.000	0.096
ACR-3	0.00007	0.000004	0.07	0.0000	0.000	0.064
T-1,4 DCB	0	0	0	0	0	0
TCB-1	0	0	0	0	0	0
TCB-2	0	0	0	0.000000	0.00000	0
Meso	0	0	0	0.0000000	0.000000	0
C4Cl4	3.782E-06	1.82757E-07	0.005928087	3.74E-07	1.3E-06	0.003
C4Cl5	0	0	0	0	_ 0	0
C4Cl6	0	0	. 0	0	0	0
1,2-DCB	0.00008	0.000004	0.11	0.000008	0.00002	0.069
NMP	0	0	0	0	. 0	0
	0.1250	0.0060	123.02	0.012	0.027	108.335



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Refined ACR Storage Tank

TEMPO ID: EQT0199

Point Source ID No.: 1700-80.1

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Compound	Total	Average	Maximum	Annual
}	Loss	Emission	Emission	Emissions
İ	j	Raté	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	108	0.012	-	0.054
1,2-Dichlorobenze	0.07	0.000008	•	0.00003
Total HAPs	0.07	0.000008	•	0.00003
Total TAPs	0.07	0.000008	•	0.00003



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Chlorinated ACR Storage Tank

TEMPO ID: EQT0200

Point Source ID No.: 1700-80.2 Page

Basis:

Chlorinated ACR from the Transfer Tank in Monomer is pumped through the 1.5" transfer header to the Chlorinated ACR storage tank in Polly Area. The Chlorinated ACR Storage tank is jacketed with -18 deg C C brine and is nitrogen blanketed. There will be flow in and out of the tank simultaneously. The Chlorinated ACR Storage Tank is the former # 2 Crude CD Storage Tank. Tank is limited to 76.5% inventory by Neovent requirements.

The operating mode of this tank will be to run the level at a constant 50%, by matching the ACR production rate with the ACR refining rate.

Therefore working losses from this tank will be minimal.

However ACR Refining is designed to run at 50% uptime and ACR Synthesis at 80% uptime Therefore for 30% of time chlorinated ACR will run into the tank increasing the level, since ACR Refining is down.

Therefore ACR venting will occur during this period

Assume the tank is refilled for turnarounds twice per year.

2921460 lb/yr ACR Produced =

Max ACR produced = 13000 lb/day

Chlorinated ACR per Refined ACR Produced = 1.591 lb/lb

> Max Chlorinated ACR Produced = 862 lb/hr

Chlorinated ACR Tank Volume = 17600 gal

Max. Liquid Level in Chlorinated ACR Tank = 128040 lb 0.00 C

Tank Temperature =

273.15 K

Tank Pressure = 6 psig

20.7 psia

1070.20 mm Hg

1,22 s.g. of Chlorinated ACR at 0 C =



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Chlorinated ACR Storage Tank

TEMPO ID: EQT0200

Point Source ID No.: 1700-80.2

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Emission Rates

Use the working loss equation from Section 7.1.3.1.2 of AP-42, 5th Edition.

 L_W , Working Loss, lb/yr = 0.001 * M_V * P_{VA} * (Q / 42) * K_N * K_P

M_V = vapor molecular weight, lb/lb-mol

= 123.04 lb/lb-mole

P_{VA} = vapor pressure at daily average liquid surface temperature, psia

= 0.1870 psia

Q = throughput, bbl/yr

Since tank is operated as a constant level tank for 70% of the time, the throughput is calculated for the remaining time plus 2 turnarounds

= [2921460 lb ACR/yr x 1.591 lb CACR/lb ACR x 0.3 / (1.22 x 8.34 lb/gal)

+ 17600 gal x 0.765 x 2] / 42 gal/bbl

= 3904 bbl/vr

N = number of turnovers

= 3904 bbl/yr / (17600 gal x 0.765 / 42 bbl/gal)

12.18

 K_N = turnover factor

: 1 for N <= 36

= (180+N) / 6N for N > 36

K_P = working loss product factor

1 for all liquids except crude oil



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Chlorinated ACR Storage Tank

TEMPO ID: EQT0200

Point Source ID No.: 1700-80.2 Page 3 of 4

Component	Wt %	Mol Wt	Wt%/MW	Mole	Vapor	Partial
• •	in liquid	İ		Fraction	Pressure	Pressure
	[in Liquid	(mm Hg)	(mm Hg)
ACR	0.720	122.99	0.585	0.7399	11.86	8.7716
ACR-1	0:039	122.99	0.032	0.0399	7.96	0.3174
ACR-2	0.038	122.99	0.031	0.0388	5.37	0.2085
ACR-3	0.099	122.99	0.080	0.1013	3.58	0.3629
T-1,4 DCB	0	125	0	0.0000	. 0.01	0
TCB-1	0	159.5	0	0.0000	0.64	0
TCB-2 ·	0.082	159.5	0.051	0.0647	0.12	0.0076
Meso	0.018	196	0.009	0.0116	0.07	0.0008
C4Cl4	0	196	0	0.0000	0.07	. 0
C4Cl5	0	230.5	0	0.0000	0.07	0
C4Cl6	0	265	0	0.0000	0.07	0
1,2-DCB	0.005	166.00	0.003	0.0038	1.11	0.0042
NMP.	0	85.1	Ō	0.0000	0.00	0
	1.000		0.791	1		9.6730

Component	Partial	Mole	Mol Weight	Avg. Hourly	Max. Hourly	Annual
···	Pressure	Fraction	of Vapor	Emissions	Emissions	Emissions
	(psia)	in Vapor	lb/lb-mol	lb/hr	lb/hr	lb/yr
ACR	0.16961	0.008196	111.53	0.009	0.045	81.479
ACR-1	0.00614	0.000297	4.04	0.0003	0.002	2.949
ACR-2	0.00403	0.000195	2.65	0.0002	0.001	1.937
ACR-3	0.00702	0.000339	4.61	0.0004	0.002	3.371
T-1,4 DCB	0	0	0	0	0	0
TCB-1	0	0	0	0	0	0
TCB-2	0.00015	0.000007	0.13	0.000008	0.00005	0.070
Meso	0.00002	0.000001	0.02	0.0000008	0.000006	0.007
C4Cl4	O	0	0	0	0	0
C4CI5	0	0	0	0	0	0
C4Cl6	O	0	0	0	0	0
1,2-DCB	0.00008	0.000004	0.07	0.000004	0.00003	0.039
NMP	0	0	0	0	0	0
	0.1870	0.0090	123.04	0.010	0.049	89.852



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Chlorinated ACR Storage Tank

TEMPO ID: EQT0200

Point Source ID No.: 1700-80.2

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Compound	Total	Average	Maximum	Annual
]	Loss	Emission	Emission	Emissions
1	- 1	Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	90	0.010	_	0.045
1,2-Dichlorobenze	0.04	0.000004	•	0.00002
Total HAPs	0.04	0.000004	•	0.00002
Total TAPs	0.04	0.000004		0.00002



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR Refining Vent

TEMPO ID: RLP0018

Point Source ID No.: 1700-81 Page 1 of 1

Basis:

Emissions calculated using an ASPEN simulation.

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	4400	1.00	10.00	2.20
1,2-Dichlorobenze	<20	<0.001	<0.001	<0.01
HCI	1400	0.30	4.50	0.70
Total HAPs	1420	0.30	4.50	0.70
Total TAPs	1420	0.30	4.50	0.70



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR/Solvent Blend Tank

TEMPO ID: EQT0201

Point Source ID No.: 1700-82 Page 1 of 4

Basis:

ACR is sold to customers in drum quantities. To prevent polymerization of the ACR, the ACR is diluted with a solvent and extra polymerization inhibitors are added. The material to be drummed is made up in an ACR-solvent blend tank. Refined ACR from the

ACR is added to the blend tank at -5 deg C. Solvent in Blend Tank will be at -10 deg C prior to ACR addition. Mixture temperature and composition when 50% of the ACR has been added represents average conditions during vapor displacement and was used to

Initial solvent added at ambient warehouse temperature (65F). External cooler will cool solvent down as it is added. Assume at mean temperarture of -1 deg C.

Assume max rates are 120% of average rates.

	Units	ACR	ACR	ACR
•	1	Perclene	. DCM	Xylene
Annual Drums Made-up	Drums/yr	2,000	200	500
Drums per Blend Tank Fill	Drums	18	18	18
Refined ACR in ACR / Perclene Drum	lbs Ref. ACR	250	300	200
Amount Solvent per Drum	lbs Solvent	250	200	200
Solvent Containers per Batch	Containers	1	6	9
Solvent Container Mass	lbs	4,700	603	400
Solvent Unloading Time	minutes	17.12	15.87	24.57
Spec. Gravity of Solvent at -1 C	g/cc	1.65	1.37	0.88
Annual Blend Tank Fills	Blends/yr	111	11	27
Volume of Blend Tank	gallons	960		,
Solvent Fill Rate	gpm	20		
Annual ACR Used in Drum Shipments	рру	660,000		
Tank Pressure at Venting	psig	2.5		
	mm Hg	889		
Avg Tank Temp During Solvent Addition	O	-1		
	K	272		
Adj. Gas Specific Vol. for Solvent Addition	ft ³ /lb mol	306		



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR/Solvent Blend Tank

TEMPO ID: EQT0201

Point Source ID No.: 1700-82

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Emission Rates

Estimation of Losses Due To Solvent Addition to Blend Tank

Component	Mol Wt	Vapor	Solvent Mole	Displaced	Displaced	Displaced
		Pressure	Fraction in	Volume in	Total Moles	
	- 1		Vapor	Blend Tank	from Tank	Solvent
i				,		from Tank
<u></u>	lb/lb-mol	mm Hg		ft ³	lb-mol	lb-mol
Perclene	165.83	4.02	0.005	45.534	0.149	0.0007
Dichloromethane	84.93	137.18	0.154	42.409	0.139	0.0214
Xylene	106.17	1.58	0.002	65.424	0.214	0.0004

Component	Working Loss Ib	Avg. Hourly Emissions lb/hr	Max. Hourly Emissions lb/hr	Annual Emissions lb/vr	
Perclene	0.112	0.391	0.470	12.393	
Dichloromethane	1.817	6.871	8.246	19.992	
Xylene	0.040	0.099	0.118	1.090	

Estimation of Losses Due To ACR Addition to Perclene in the Blend Tank

Assume conditions at the 50% ACR addition point, i.e., -10 C.

Average Hourly ACR Fill Rate = 667 pph

Tank Temperature during ACR Addition = -10 C

Tank Temperature during ACR Addition = 263 K

Adjusted Gas Specific Volume for ACR Addition = 296 ft³/lb-mol

Density of ACR at Specific Temperature = 1.20 g/cc

Mass of ACR Added = 4700 lbs

Volume Displaced by ACR = 62.74 ft³

Moles Displaced by ACR = 0.2123 lb-mol

ACR Fill Time = 7.05 hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

, Source Description: ACR/Solvent Blend Tank

TEMPO ID: EQT0201

Point Source ID No.: 1700-82

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Component	Wt % in	Mol Wt	Mole Fraction	Vapor	Partial	Mole
•	Liquid		in Liquid	Pressure	Pressure	Fraction
						in Vapor
	ĺ	lb/lb-mol	<u> </u>	mm Hg	mm Hg	
ACR	0.3167	122.99	0.257	6.657	1.711	0.0019
ACR-1	0.0167	122.99	0.014	4.274	0.058	0.0001
Perciene	0.6667	165.83	0.729	3.875	2.827	0.0032

Component	Displaced Moles from	Working Loss	Avg. Hourly Emissions	Max. Hourly	Annual Emissions
•	Tank			Emissions	
]	lb-mol	lb	lb/hr	lb/hr	lb/yr
ACR	0.00041	0.050	0.007	0.009	5.574
ACR-1	0.00001	0.002	0.0002	0.000	0.188
Perclene	0.00067	0.112	0.016	0.019	12.419

Estimation of Losses Due To ACR Addition to Dichloromethane in the Blend Tank

Mass of ACR Added =

5427 lbs

Volume Displaced by ACR = **

72.45 ft³

Moles Displaced by ACR =

0.2451 lb-mol

ACR Fill Time =

8.14 hr

Component	Wt % in Liquid	Mol Wt	Mole Fraction in Liquid	Vapor Pressure	Partial Pressure	Mole Fraction in Vapor
		lb/lb-mol		mm Hg	mm Hg	
ĀCR	0.4071	122.99	0.495	6.657	3.292	0.0037
ACR-1	0.0214	122.99	0.026	4.274	0.111	0.0001
Dichloromethane	0.5714	84.93	0.479	132.230	63.387	0.0713

Component	Displaced Moles from	Working Loss	Avg. Hourly Emissions	Max. Hourly Emissions	Annual Emissions
	Tank lb-mol	lb	lb/hr_	lb/hr	lb/yr
ACR	0.00091	0.112	0.014	0.016	
ACR-1	0.00003	0.004	0.0005	0.001	0.041
Dichloromethane	0.01747	1.484	0.182	0.219	16.321



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR/Solvent Blend Tank

TEMPO ID: EQT0201

Point Source ID No.: 1700-82

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Estimation of Losses Due To ACR Addition to Xylene in the Blend Tank

Mass of ACR Added =

3600 lbs

Volume Displaced by ACR =

48.06 ft³

Moles Displaced by ACR =

0.1626 lb-mol

ACR Fill Time =

5.40 hr

Component	Wt % in Liquid	Mol Wt	Mole Fraction in Liquid	Vapor Pressure	Partial Pressure	Mole Fraction in Vapor
		lb/lb-moi		mm Hg	mm Hg	•
ACR	0.3167	122.99	0.348	6.657	2.319	0.0026
ACR-1	0.0167	122.99	0.018	4.274	0.078	0.0001
Xylene	0.6667	106.17	0.633	1.523	0.964	0.0011

Component	Displaced Moles from	Working Loss	Avg. Hourly Emissions	Max. Hourly	Annual Emissions
	Tank			Emissions	
	lb-mol	lb	lb/hr	lb/hr	lb/yr
ACR	0.00042	0.052	0.010	0.012	1.408
ACR-1	0.00001	0.002	0.0003	0.000	
Xylene	0.00018	0.019	0.003	0.004	0.505

Compound	Total	Average	Maximum	Annual	
	Loss	Emission	Emission	Emissions	
		Rate	Rate		
	lb/yr	lb/hr	lb/hr	tpy	
Total VOC	10	0.134	0.142	0.005	
Dichloromethane	36	7.054	9.895	0.018	
Tetrachlorethylen	25	0.407	0.563	0.012	
Xylene	2	0.102	0.142	0.001	
Total HAPs	63	7.563	9.895	0.031	
Total TAPs	63	7.563	9.895	0.031	



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR Drumming Vent

TEMPO ID: RLP0019

Point Source ID No.: 1700-83 Page 1 of

Basis:

ACR- solvent mixtures from the ACR blend tank are added to 55-gallon drums to supply material to customers. Vapors are not recovered from the drumming operation. There is an area ventilation fan in the open drumming shed to minimize operator exposure to vapors during the filling operation. Maximum hourly emissions assume that only 4 pallets (16 drums) of material can be loaded out in one hour, based upon past experience. The max. for ACR/MeCl is 13 drums as this is the largest order experienced. Average hourly emissions was calculated by prorating the hourly emission by type by the annual order quantity by type.

	Units	ACR ·	ACR	ACR
		Perclene	DCM	Xylene
Vap Press of Solvent @ -5 C	mm Hg	3.1	111.9	1.0
Spec. Grav. Of Solvent @ -5 C		1.66	1.37	0.89
Spec. Gravity of ACR @ -5 C		1.19	1.19	1.19
Wt % ACR in Drum	wt %	50%	60%	50%
s.g of ACR Solvent Blend		1.39	1.26	1.02
Annual No. of Drums Made up	#	2000	200	500
Max No. of Drums Filled	#/hr	16	13	16
Avg No. of Drums Filled	#/hr	12	12	12
ACR Solvent Mixture per Drum	lbs	500	500	400
Drum Temperature	O	-5		
Drum Temperature	K	268		
Drum Pressure	mm Hg	760		
Gas Specific Volume	ft ³ /lb-mol	352		



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR Drumming Vent

TEMPO ID: RLP0019

Point Source ID No.: 1700-83

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Emission Rates

ACR/Perclene Drum Filling

Component	Wt % in	Mol Wt	Wt%/MW	Mole	Vapor	Partial
	Liquid			Fraction	Pressure	Pressure
		{		in Liquid		
·	<u> </u>	lb/lb-mol		1	mm Hg	mm Hg
ACR	0.4750	122.99	0.386	0.546	8.932	4.8789
ACR-1	0.0180	122.99	0.015	0.021	5.867	0.1215
Others	0.0070	150	0.005	0.007	3.930	0.0259
Perclene	0.5000	165.83	0.302	0.426	3.082	1.3144
	1		0.707	1		:

Component	Mole	Working	Avg. Hourly	Max.	Annual
Ī	Fraction	Loss	Emissions	Hourly	Emissions
i	in Vapor			Emissions	•
		lb/drum	lb/hr	lb/hr	lb/yr
ACR	0.0064	0.013	0.155	0.207	25.850
ACR-1	0.0002	0.0003	0.004	0.005	0.644
Others	0.00003	0.00008	0.001	0.001	0.168
Perclene	0.0017	0.005	0.056	0.075	9.390

ACR/Dichloromethane Drum Filling

Component	Wt % in Liquid	Mol Wt	Wt%/MW	Mole Fraction in Liquid	Vapor Pressure	Partial Pressure
		lb/lb-mol		Ì	mm Hg	mm Hg
ACR	0.5700	122.99	0.463	0.484	8.932	4.3227
ACR-1	0.0216	122.99	0.018	0.018	5.867	0.1076
Others	0.0084	150	0.006	0.006	3.930	0.0230
Dichloromethane	0.4000	84.93	0.471	0.492	111.883	55.0273
	1		0.958	1		



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR Drumming Vent

TEMPO ID: RLP0019

Point Source ID No.: 1700-83 Page 3 of 4

Component	Mole Fraction in Vapor	Working Loss	Avg. Hourly Emissions	Max. Hourly Emissions	Annual Emissions
	·	lb/drum	lb/hr	lb/hr	lb/yr
ACR	0.0057	0.013	0.151	0.164	2.525
ACR-1	0.0001	0.0003	0.004	0.004	0.063
Others	0.00003	0.00008	0.001	0.001	0.016
Dichloromethane	0.0724	0.111	1.332	1,443	22.194

ACR/Xylene Drum Filling

Component	Wt % in	Mol Wt	Wt%/MW	Mole	Vapor	Partial
·	Liquid		i	Fraction	Pressure	Pressure
]			in Liquid		
·		lb/lb-mol			mm Hg	mm Hg
ACR	0.4750	122.99	0.386	0.441	8.932	3.9356
ACR-1	0.0180	122.99	0.015	0.017	5.867	0.0980
Others	0.0070	150	0.005	0.005	3.930	0.0209
Xylene	0.5000	106.17	0.471	0.537	1.032	0.5544
	1		0.876	1		

Component	Mole	Working	Avg. Hourly	Max.	Annual
	Fraction	Loss	Emissions	Hourly	Emissions
	in Vapor			Emissions	
·		lb/drum	lb/hr	lb/hr	lb/yr
ACR	0.0052	0.011	0.136	0.181	5.671
ACR-1	0.0001	0.0003	0.003	0.005	0.141
Others	0.00003	0.00007	0.001	0.001	0.037
Xylene	0.00073	0.001	0.017	0.022	0.690



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: ACR Drumming Vent

TEMPO ID: RLP0019

Point Source ID No.: 1700-83

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Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	45	0.201	0.346	0.023
Dichloromethane	22	0.099	1.443	0.011
Tetrachloroethyle	9	0.042	0.075	0.005
Xylene	1	0.003	0.022	0.0003
Total HAPs	32	0.143	1.443	0.016
Total TAPs	32	0.143	1.443	0.016



RTP Environmental Associates, Inc. . Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Advanced Fibres System (AFS) Emulsion Shipping Emulsion Blend Tank

TEMPO ID: EQT0212

Point Source ID No.: 1700-84A Page 1 of 3

Basis:

AFS will purchase up to 32 totes of WRT, GRT, GW emulsion monthly Use 48 totes for calculation

Vented annual volume of ACS tank is that of 48 totes per month

Toluene is emitted from GRT and GW emulsions.

90% of emulsion shipped will contain toluene

AFS Tank Volume = 5772 gal 771.72 ft3 35 C Tank filling at ambient temperature = Vapor pressure CD at 35 °C is 334.3 mm Hg Vapor pressure toluene at 35 °C is 52 mm Hq · MW of CD = 88.54 lb/lb-mol 92.14 lb/lb-mol MW of Toluene = 0.099 wt % max CD component of emulsion = Toluene component of emulsion = 0.0165 wt % max Solids component of emulsion = 45 wt % Tote Contains = 2200 lb emulsion Emulsion Density = 67.28 lb/ft3 No. of Totes = 48 per month Specific Volume = 359.7 ft3/mol 8760 hr Operating Time =

Emission Rates

Convert CD concentration to exclude the solids component

CD component of emulsion = 0.099 / (1 - 0.45)

= 0.180 %

Mole Fraction CD = 0.18 / 88.54 / [0.18 / 88.54 + (100 - 0.18) / 18]

= 0.00037

Partial Pressure CD in Tank = 334.3 x 0.00037

0.123 mm Hg

Mole Fraction CD in Vapor = 0.123 mm Hg / 760

= 0.000161



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Advanced Fibres System (AFS) Emulsion Shipping Emulsion Blend Tank

TEMPO ID: EQT0212

Point Source ID No.: 1700-84A

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Vapor Vented per Tote = 2200 lb/tote / 67.284 lb/cu ft

32.70 ft3/tote

CD Emitted = 48 totes/month x,12 months/yr x 32.7 cu ft/tote x 0.000161

= 3.04 ft3

CD Emitted = 3.04 cu ft x 88.54 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

= 0.84 lb

= 0.0004 tpy

= 0.0001 lb/hr

Convert toluene concentration to exclude the solids component

Toluene component of emulsion = 0.0165 / (1 - 0.45)

0.030 %

Mole Fraction Toluene = 0.03/92.14/[0.03/92.14+(100-0.03)/18]

= 0.00006

Partial Pressure Toluene in Tank = 52 x 0.00006

0.003 mm Hg

Mole Fraction Toluene in Vapor = 0.003 mm Hg / 760

= 0.000004

Toluene Emitted = 48 totes/month x 12 months/yr x 32.7 cu ft/tote x 0.000004 x 0.9

0.07 ft3

Toluene Emitted = 0.07 cu ft x 92.14 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

= 0.02 lb

= 0.00001 tpv

= 0.000002 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Advanced Fibres System (AFS) Emulsion Shipping Emulsion Blend Tank

TEMPO ID: EQT0212

Point Source ID No.: 1700-84A

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Compound	·		Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	0.86	0.0001	0.0001	0.0004
Chloroprene	0.84	0.0001	0.0001	0.0004
Toluene	0.02	0.000002	0.000002	0.00001
Total HAPs	0.86	0.0001	0.0001	0.0004
Total TAPs	0.86	0.0001	0.0001	0.0004



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Advanced Fibres System (AFS) Emulsion Shipping Totes

TEMPO ID: EQT0213

Point Source ID No.: 1700-84B Page 1 of

Basis:

AFS will purchase up to 32 totes of WRT, GRT, GW emulsion monthly Use 48 totes for calculation Vented annual volume of ACS tank is that of 48 totes per month Toluene is emitted from GRT and GW emulsions. 90% of emulsion shipped will contain toluene

Tote filling at ambient temperature = 35 C

Vapor pressure CD at 35 °C is 334.3 mm Hg
Vapor pressure toluene at 35 °C is 52 mm Hg

MW of CD = 88.54 lb/lb-mol

MW of Toluene = 92.14 lb/lb-mol

CD component of emulsion = 0.099 wt % max
Toluene component of emulsion = 0.0165 wt % max

Solids component of emulsion = 0.0165 wt % max Solids component of emulsion = 45 wt %

Tote Contains = 2200 lb emulsion

Emulsion Density = 67.28 lb/ft3

No. of Totes = 48 per month

Specific Volume = 359.7 ft3/mol

Operating Time = 8760 hr

Emission Rates

Convert CD concentration to exclude the solids component

CD component of emulsion = 0.099 / (1 - 0.45)

= 0.180 %

Mole Fraction CD = 0.18 / 88.54 / [0.18 / 88.54 + (100 - 0.18) / 18]

= 0.00037

Partial Pressure CD in Totes = 334.3 x 0.00037

0.123 mm Hg

Mole Fraction CD in Vapor = 0.123 mm Hg / 760

= 0.000161



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Advanced Fibres System (AFS) Emulsion Shipping Totes

TEMPO ID: EQT0213

Point Source ID No.: 1700-84B

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Vapor Vented per Tote = 2200 lb/tote / 67.284 lb/cu ft

= 32.70 ft3/tote

CD Emitted = 48 totes/month x 12 months/yr x 32.7 cu ft/tote x 0.000161

= 3.04 ft3

CD Emitted = 3.04 cu ft x 88.54 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

0.84 lb

= 0.0004 tpy

= 0.0001 lb/hr

Convert toluene concentration to exclude the solids component

Toluene component of emulsion = 0.0165 / (1 - 0.45)

0.030 %

Mole Fraction Toluene = 0.03/92.14/[0.03/92.14+(100-0.03)/18]

= 0.00006

Partial Pressure Toluene in Totes = 52 x 0.00006

0.003 mm Hg

Mole Fraction Toluene in Vapor = 0.003 mm Hg./760

= 0.000004

Toluene Emitted = 48 totes/month x 12 months/yr x 32.7 cu ft/tote x 0.000004 x 0.9

= 0.07 ft3

Toluene Emitted = 0.07 cu ft x 92.14 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

= 0.02 lb

= 0.00001 tpy

= 0.000002 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Advanced Fibres System (AFS) Emulsion Shipping Totes

TEMPO ID: EQT0213

Point Source ID No.: 1700-84B Page 3 of 3

Compound	Total	Average	Maximum	Annual
	Loss		Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	0.86	0.0001	0.0001	0.0004
Chloroprene	0.84	0.0001	0.0001	0.0004
Toluene	0.02	0.000002	0.000002	0.00001
Total HAPs	0.86	0.0001	0.0001	0.0004
Total TAPs	0.86	0.0001	0.0001	0.0004



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Liquid Dispersion Loading (Truck, Tote, Railcar)

TEMPO ID: EQT0214

Point Source ID No.: 1700-85 Page 1 of 4

Basis:

65% of LD shipments will be by bulk carrier.

LD loaded from Emulsion Storage Tanks # 11, 12, 15,16 into vendor tank trucks

Total LD Shipped = 15 MMlb/yr dry wt

Total LD-750 Shipped = 3.7 MMlb/yr dry wt Solids component = 50 wt %

Total LD Shipments Bulk = 65 % of total

Loading Temperature = 35 C Vapor pressure CD at 35 °C = 334.3 mm Hg Vapor pressure toluene at 35 °C = 52 mm Hg

MW of CD = 52 htm Hg

88.54 lb/lb-moi

MW of Toluene = 92.14 lb/lb-mol
CD component of emulsion = 0.099 wt % max

Toluene component of emulsion = 0.008415 wt % (LD-750)

Weight of LD loaded per truck = 46000 lb wet wt
Weight of LD loaded per tote = 2200 lb wet wt

Weight of LD loaded per Railcar = 180000 lb wet wt LD Density = 68.53 lb/ft3

Specific Volume = 359.7 ft3/mol Operating Time = 8760 hr

Emission Rates

Truck Loading

Convert CD concentration to exclude the solids component

CD component of emulsion = 0.099 / (1 - 0.5)

= 0.198 %

Mole Fraction CD = 0.198 / 88.54 / [0.198 / 88.54 + (100 - 0.198) / 18]

= 0.0004

Partial Pressure CD = 334.3 x 0.0004

0.135 mm Hg

Mole Fraction CD in Vapor = 0.135 mm Hg / 760

= 0.000177



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Liquid Dispersion Loading (Truck, Tote, Railcar)

TEMPO ID: EQT0214

Point Source ID No.: 1700-85

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Vapor Vented per Truck = 46000 lb/truck / 68.53 lb/cu ft

671.24 ft3/truck

No. of Trucks = $15 \text{ MMlb/yr dry} / (1 - 0.5) \times 0.65 \times 1000000 / 46000 \text{ lb/truck}$

= 424 trucks

CD Emitted = 424 trucks/yr x 671.24 cu ft/truck x 0.000177

= 50.48 ft3

CD Emitted = 50.48 cu ft x 88.54 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

= 14.02 lb

= 0.007 tpy

= 0.002 lb/hr

Convert toluene concentration to exclude the solids component

Toluene component of emulsion = 0.008415 / (1 - 0.5)

= 0.017 %

Mole Fraction Toluene = 0.01683 / 92.14 / [0.01683 / 92.14 + (100 - 0.01683) / 18]

= 0.00003

Partial Pressure Toluene in Tank = 52 x 0.00003

0.002 mm Hg

Mole Fraction Toluene in Vapor = 0.002 mm Hg / 760

= 0.000002

No. of Trucks = 3.7 MMlb/yr dry / (1 - 0.5) x 0.65 x 1000000 / 46000 lb/truck

= 105 trucks

Toluene Emitted = 105 trucks/yr x 671.24 cu ft/truck x 0.000002

e 0.16 ft3

Toluene Emitted = 0.16 cu ft x 92.14 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

= 0.05 lb

= 0.00002 tpy

= 0.000005 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Liquid Dispersion Loading (Truck, Tote, Railcar)

TEMPO ID: EQT0214

Point Source ID No.: 1700-85

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Tote Filling

Allow 25% for reworking off spec and returns

Vapor Vented per Tote = 2200 lb/tote / 68.53 lb/cu ft

= 32.10 ft3/tote

No. of Totes = 15 MMlb/yr dry / (1 - 0.5) x (1 - 0.65) x 1000000 / 2200 lb/tote x 1.25

= 5966 totes

CD Emitted = 5966 totes/yr x 32.1 cu ft/tote x 0.000177

= 33.97 ft3

CD Emitted = 33.97 cu ft x 88.54 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

= 9.43 lb

= 0.005 tpy

= 0.001 lb/hr

No. of LD-750 Totes = 3.7 MMlb/yr dry / (1 - 0.5) x (1 - 0.65) x 1000000 / 2200 lb/tote x 1.25

1472 totes

Toluene Emitted = 1472 totes/yr x 32.1 cu ft/tote x 0.000002

. 0.11 ft3

Toluene Emitted = 0.11 cu ft x 92.14 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

0.03 lb

0.00002 tpy

= 0.000004 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Liquid Dispersion Loading (Truck, Tote, Railcar)

TEMPO ID: EQT0214

Point Source ID No.: 1700-85 Page 4 of 4

Railcar Loading

A maximum of 50 railcars will be loaded per year.

No. of Railcars =

50 railcars

Vapor Vented per Truck = 180000 lb/railcar / 68.53 lb/cu ft

= 2626.59 ft3/railcar

CD Emitted = 50 railcars/yr x 2626.59 cu ft/railcar x 0.000177

= 23.29 ft3

CD Emitted = 23.29 cu ft x 88.54 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

6.47 lb

= 0.003 tpy

= 0.001 lb/hr

Toluene Emitted = 50 railcars/yr x 2626.59 cu ft/railcar x 0.000002

= 0.30 ft3

Toluene Emitted = 0.3 cu ft x 92.14 lb/lb-mole / [359.7 cu ft/mole x (273 / (273 + 35))]

= 0.09 lb

= 0.00004 tpy

= 0.00001 lb/hr

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
	1	Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	30.08	0.0034	0.0034	
Chloroprene	29.92	0.0034	0.0034	0.015
Toluene	0.16	0.00002	0.00002	0.00008
Total HAPs	30.08	0.0034	0.0034	0.015
Total TAPs	30.08	0.0034	0.0034	0.015



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Fugitive Emissions - Neoprene Unt

TEMPO ID: FUG0004

Point Source ID No.: 1-93 Page 1 of 3

Basis:

Site specific emission factors are based on bagging studies performed at various DuPont-Dow facilities including the Pontchartrain Site and consider historical performance from monitoring.

Emissions are for those components located outside of the Poly Building. Fugitives from equipment components located in the Poly Building are covered by the various manhole vents and Poly Building wall fans.

Calculation basis provided by Ms. D. Grego, DuPont

Summary

Equipment	Service	Total	Average	Total	Total
' '	1.	Component	Emission	Emissions	Emissions
İ		Count	Rate		
	1		lb/hr	lb/yr	tpy
Valves	Lt. Liquid	314	0.1225	1073	0.54
	Gas	89	0.0320	281	0.14
Pump Seals	Lt. Liquid	14	0.0161	141	0.07
Connectors	All	1780	0.3204	2807	1.40
PRVs	Gas	29	0.0035	30	0.02
		Total:	0.4945	4332	2.17

Maximum Emission Rate =

. 0.4945 lb/hr

Speciation

Chloroprene Emissions = 0.3657 lb/hr Chloroprene Emissions = 3203 lb/yr Chloroprene Emissions = 1.602 tpy

Toluene Emissions = 0.0501 lb/hr
Toluene Emissions = 439 lb/yr
Toluene Emissions = 0.219 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Fugitive Emissions - Neoprene Unt

TEMPO ID: FUG0004

Point Source ID No.: 1-93

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Components in Chloroprene Service

Equipment	Service	Component	Dupont-Dow	Emission	Total
		Count	Factor	Rate	Emissions
			lb/hr/src	lb/hr	lb/yr
Valves	Lt. Liq./Gas	234	3.90E-04	0.0913	799
	Gas	66	3.60E-04	0.0238	208
Pump Seals	Lt. Liquid	9	1.15E-03	0.0104	91
Connectors	All	1335	1.80E-04	0.2403	2105
PRVs	Gas	21	1.20E-04	0.0025	22
	-		Total:	0.3657	3203

Components in Toluene Service

Equipment	Service	Component	Dupont-Dow	Emission	Total
		Count	Factor	Rate	Emissions
			lb/hr/src	lb/hr	lb/yr
Valves	Lt. Liq./Gas	32	3.90E-04	0.0125	109
	Gas	9	3.60E-04	0.0032	28
Pump Seals	Lt. Liquid	2	1.15E-03	0.0023	20
Connectors	All·	178	1.80E-04	0.0320	281
PRVs	Gas	3	1.20E-04	0.0004	3
_ _			Total:	0.0501	439

Components in Acetic Acid Service

Equipment	Service	Component	Dupont-Dow	Emission	Total
]	Count	Factor	Rate	Emissions
	i	. ~ .	. lb/hr/src	lb/hr	lb/yr
Valves	Lt. Liq./Gas	16	3.90E-04	0.0062	55
	Gas	5	3.60E-04	0.0018	16
Pump Seals	Lt. Liquid	1	1.15E-03	0.0012	10
Connectors	All	89	1.80E-04	0.0160	140
PRVs	Gas	2	1.20E-04	0.0002	2
	<u>-</u> -		Total:	0.0252	221



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Fugitive Emissions - Neoprene Unt

TEMPO ID: FUG0004

Point Source ID No.: 1-93

Page

Components in Other VOC Service

Equipment	Service	Component	Dupont-Dow	Emission	Total
		Count	Factor	Rate	Emissions
			lb/hr/src	lb/hr	lb/yr
Valves	Lt. Liq./Gas	32	3.90E-04	0.0125	109
	Gas	9	3.60E-04	0.0032	28
Pump Seals	Lt. Liquid	2	1.15E-03	0.0023	20
Connectors	All	178	1.80E-04	0.0320	281
PRVs	Gas	3	1.20E-04	0.0004	3
	•		Total:	0.0501	439



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Diversion Tank

TEMPO ID: EQT0202

Point Source ID No.: 3-95

Page

1

Basis:

Calculations are performed using Water 9.

Since ACR is not in the database, emissions of ACR are estimated to be similar to toluene since the two compounds are of similar vapor pressures.

Calculation basis provided by Ms. D. Grego, DuPont

Hours of Operation =

8760 hr

Average Emission Rates

Acetic Acid

Emission Rate = 2.056E-08 g/s
Emission Rate = 0.0000002 lb/hr
Emission Rate = 0.001 lb/yr
Emission Rate = 0.0000007 tpy

Chloroprene

Emission Rate = 3.16E-06 g/s
Emission Rate = 0.00003 lb/hr
Emission Rate = 0.2 lb/yr
Emission Rate = 0.0001 tpy

Toluene

Emission Rate = 1.666E-07 g/s
Emission Rate = 0.000001 lb/hr
Emission Rate = 0.01 lb/yr
Emission Rate = 0.000006 tpy

ACR

Emission Rate = 1.666E-07 g/s
Emission Rate = 0.000001 lb/hr
Emission Rate = 0.01 lb/yr
Emission Rate = 0.000006 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Diversion Tank

TEMPO ID: EQT0202

Point Source ID No.: 3-95

Page

2

3

of

1,2-Dichlorobenzene

Emission Rate =

1.60E-07 g/s

Emission Rate = Emission Rate =

0.000001 lb/hr 0.01 lb/yr

Emission Rate =

0.000006 tpy

Maximum Emission Rates

Acetic Acid

Emission Rate =

1.58E-07 g/s

Emission Rate =

0.000001 lb/hr

Chloroprene

Emission Rate =

1.37E-05 g/s

Emission Rate =

0.0001 lb/hr

Toluene

Emission Rate =

1.28E-06 g/s

Emission Rate =

0.00001 lb/hr

ACR

Emission Rate =

1.28E-06 g/s

Emission Rate =

0.00001 lb/hr

1,2-Dichlorobenzene

Emission Rate =

1.23E-06 g/s

Emission Rate =

0.00001 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Diversion Tank

TEMPO ID: EQT0202

Point Source ID No.: 3-95

Page

3

of

3

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
[Rate	Rate	
i l	lb/yr	lb/hr	lb/hr	tpy
Total VOC	0.3	0.00003	0.0001	0.0001
Chloroprene	0.2	0.00003	0.0001	0.0001
1,2-Dichlorobenze	0.01	0.000001	0.00001	0.000006
Toluene	0.01	0.000001	0.00001	0.000006
Total HAPs	0.2	0.00003	0.0001	0.0001
Total.TAPs	0.2	0.00003	0.0001	0.0001



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 1 Aeration Tank

TEMPO ID: EQT0203

Point Source ID No.: 4-95

Page

1

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3

Basis:

Calculations are performed using Water 9.

Since ACR is not in the database, emissions of ACR are estimated to be similar to toluene since the two compounds are of similar vapor pressures.

Calculation basis provided by Ms. D. Grego, DuPont

Hours of Operation =

8760 hr

Average Emission Rates

Acetic Acid

Emission Rate = 0.000005233 g/s
Emission Rate = 0.00004 lb/hr
Emission Rate = 0.0002 tpy

Chloroprene

Emission Rate = 0.062409 g/s
Emission Rate = 0.495 lb/hr
Emission Rate = 4339 lb/yr
Emission Rate = 2.170 tpy

Toluene

Emission Rate = 0.001774 g/s
Emission Rate = 0.014 lb/hr
Emission Rate = 123 lb/yr
Emission Rate = 0.062 tpy

ACR

Emission Rate = 0.001774 g/s Emission Rate = 0.014 lb/hr Emission Rate = 123 lb/yr Emission Rate = 0.062 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 1 Aeration Tank

TEMPO ID: EQT0203

Point Source ID No.: 4-95 Page 2 of 3

1,2-Dichlorobenzene

Emission Rate = 0.00184 g/s
Emission Rate = 0.015 lb/hr
Emission Rate = 128 lb/yr
Emission Rate = 0.064 tpy

Maximum Emission Rates

Acetic Acid

Emission Rate = 4.05E-05 g/s Emission Rate = 0.0003 lb/hr

Chloroprene

Emission Rate = 0.27019 g/s Emission Rate = 2.144 lb/hr

Toluene

Emission Rate = 0.013652 g/s Emission Rate = 0.108 lb/hr

ACR

Emission Rate = 0.013652 g/s Emission Rate = 0.108 lb/hr

1,2-Dichlorobenzene

Emission Rate = 0.014244 g/s Emission Rate = 0.113 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 1 Aeration Tank

TEMPO ID: EQT0203

Point Source ID No.: 4-95 Page 3 of 3

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
	ĺ	Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	4586	0.524	2.361	2.293
Chloroprene	4339	0.495	2.144	2.170
1,2-Dichlorobenze	128	0.014	0.113	0.064
Toluene	123	0.014	0.108	0.062
Total HAPs	4590	0.523	2.366	2.295
Total TAPs	4590	0.523	2.366	2.295



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 2 Aeration Tank

TEMPO ID: EQT0204

Point Source ID No.: 5-95 Page 1

Basis:

Calculations are performed using Water 9.

Since ACR is not in the database, emissions of ACR are estimated to be similar to toluene since the two compounds are of similar vapor pressures.

Calculation basis provided by Ms. D. Grego, DuPont

Hours of Operation =

8760 hr

Average Emission Rates

Acetic Acid

Emission Rate = 5.58E-07 g/s
Emission Rate = 0.000004 lb/hr
Emission Rate = 0.04 lb/yr
Emission Rate = 0.00002 tpy

Chloroprene

Emission Rate = 0.0007275 g/s
Emission Rate = 0.006 lb/hr
Emission Rate = 51 lb/yr
Emission Rate = 0.025 tpy

Toluene

Emission Rate = 0.00001718 g/s
Emission Rate = 0.0001 lb/hr
Emission Rate = 1 lb/yr
Emission Rate = 0.001 tpy

ACR

Emission Rate = 0.00001718 g/s
Emission Rate = 0.0001 lb/hr
Emission Rate = 1 lb/yr
Emission Rate = 0.001 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 2 Aeration Tank

TEMPO ID: EQT0204

Point Source ID No.: 5-95 Page 2 of 3

1,2-Dichlorobenzene

Emission Rate = 1.12E-04 g/s
Emission Rate = 0.0009 lb/hr
Emission Rate = 8 lb/yr
Emission Rate = 0.004 tpy

Maximum Emission Rates

Acetic Acid

Emission Rate = 4.31E-06 g/s Emission Rate = 0.00003 lb/hr

Chloroprene

Emission Rate = 0.00315 g/s Emission Rate = 0.025 lb/hr

Toluene

Emission Rate = 1.32E-04 g/s Emission Rate = 0.001 lb/hr

ACR

Emission Rate = 1.32E-04 g/s Emission Rate = 0.001 lb/hr

1,2-Dichlorobenzene

Emission Rate = 8.70E-04 g/s Emission Rate = 0.007 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: No. 2 Aeration Tank

TEMPO ID: EQT0204

Point Source ID No.: 5-95 Page 3 of 3

Compound	Total	Average	Maximum	Annual
	Loss	Emission	Emission	Emissions
		Rate	Rate	
]	lb/yr	lb/hr	lb/hr	tpy
Total VOC	53	0.006	0.027	0.027
Chloroprene	51	0.006	0.025	0.025
1,2-Dichlorobenze	8	0.001	0.007	0.004
Toluene	1	0.000	0.001	0.001
Total HAPs	60	0.007	0.033	0.030
Total TAPs	60	0.007	0.033	0.030



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Clarifier

TEMPO ID:

Point Source ID No.: 6-95

Page

1

3

Basis:

Calculations are performed using Water 9.

Since ACR is not in the database, emissions of ACR are estimated to be similar to toluene since the two compounds are of similar vapor pressures.

Calculation basis provided by Ms. D. Grego, DuPont

Hours of Operation =

8760 hr

Average Emission Rates

Acetic Acid

Emission Rate = 4.74E-08 g/s Emission Rate = 0.0000004 lb/hr Emission Rate = 0.003 lb/yr Emission Rate = 0.000002 tpy

Chloroprene

Emission Rate = 9.316E-06 g/s
Emission Rate = 0.00007 lb/hr
Emission Rate = 0.6 lb/yr
Emission Rate = 0.0003 tpy

Toluene

Emission Rate = 2.346E-07 g/s
Emission Rate = 0.000002 lb/hr
Emission Rate = 0.02 lb/yr
Emission Rate = 0.000008 tpy

ACR

Emission Rate = 2.346E-07 g/s
Emission Rate = 0.000002 lb/hr
Emission Rate = 0.02 lb/yr
Emission Rate = 0.000008 tpy



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Clarifier

TEMPO ID:

Point Source ID No.: 6-95

Page

2

of

3

1,2-Dichlorobenzene

Emission Rate = Emission Rate =

2

2.04E-06 g/s 0.00002 lb/hr

Emission Rate =

0.1 lb/yr

Emission Rate =

0.00007 tpy

Maximum Emission Rates

Acetic Acid

Emission Rate =

3.66E-07 g/s

Emission Rate =

0.00000 lb/hr

Chloroprene

Emission Rate =

4.03E-05 g/s

Emission Rate =

0.0003 lb/hr

Toluene

Emission Rate =

1.81E-06 g/s

Emission Rate =

0.00001 lb/hr

ACR

Emission Rate =

1.81E-06 a/s

Emission Rate =

0.00001 lb/hr

1,2-Dichlorobenzene

Emission Rate =

1.58E-05 g/s

Emission Rate =

0.0001 lb/hr



RTP Environmental Associates, Inc. Kenner, Louisiana

Client: DUPONT - PONTCHARTRAIN SITE

Source Description: Clarifier

TEMPO ID:

Point Source ID No.: 6-95

Page

3

of

3

Compound	Total	Average	Maximum	Annual
1	Loss	Emission	Emission	Emissions
		Rate	Rate	
	lb/yr	lb/hr	lb/hr	tpy
Total VOC	0.7	0.00008	0.0004	0.0003
Chloroprene	0.6	0.00007	0.0003	0.0003
1,2-Dichlorobenze	0.1	0.00002	0.0001	0.00007
Toluene	0.02	0.000002	0.00001	0.000008
Total HAPs	0.8	0.00009	0.0005	0.0004
Total TAPs	0.8	0.00009	0.0005	0.0004

APPENDIX B CERTIFICATION OF GOOD STANDING

Tom Schedler Secretary of State State of Louisiana Secretary of State



COMMERCIAL DIVISION 225.925.4704

Fax Numbers 225.932.5317 (Admin. Services) 225.932.5314 (Corporations) 225.932.5318 (UCC)

Name

Туре

City

Status

E. I. DU PONT DE NEMOURS AND COMPANY

Business Corporation (Non-Louisiana)

WILMINGTON

Active

Business:

E. I. DU PONT DE NEMOURS AND COMPANY

Charter Number:

09302090F

Registration Date:

4/24/1919

State Of Origin: Domicile Address

1007 MARKET STREET

WILMINGTON, DE 19898

Mailing Address

ATTENTION: TAX DIVISION, D-13039

1007 MARKET STREET

WILMINGTON, DE 19898

Principal Business Office

1007 MARKET STREET

WILMINGTON, DE 19898

Registered Office in Louisiana

5615 CORPORATE BLVD., STE. 400B

BATON ROUGE, LA 70808

Principal Business Establishment in Louisiana

PONTCHARTRAIN WORKS

LAPLACE, LA 70068

Status

Status:

Active

Annual Report Status:

In Good Standing

Qualified:

4/24/1919

Last Report Filed:

4/4/2012

Type:

Business Corporation (Non-Louisiana)

Registered Agent(s)

Agent:

C T CORPORATION SYSTEM

Address 1:

5615 CORPORATE BLVD., STE. 400B

City, State, Zip:

BATON ROUGE, LA 70808

Appointment Date:

12/12/1955

Officer(s)

Additional Officers: No

Officer:

NICHOLAS C. FANANDAKIS

Title:

Executive Vice-President

Address 1:

1007 MARKET ST.

City, State, Zip:	WILMINGTON, DE 19898
Officer:	THOMAS M. CONNELLY, JR.
Title:	Executive Vice-President
Address 1:	1007 MARKET ST.
City, State, Zip:	WILMINGTON, DE 19898
Officer:	MARY E. BOWLER
Title:	Secretary
Address 1:	1007 MARKET ST.
City, State, Zip:	WILMINGTON, DE 19898
Officer:	MARY P. VAN VEEN
Title:	Vice-President
Address 1:	1007 MARKET ST.
City, State, Zip:	WILMINGTON, DE 19898
Officer:	ELLEN J. KULLMAN
Title:	Officer, Director
Address 1:	1007 MARKET ST.
City, State, Zip:	WILMINGTON, DE 19898

Mergers (4)

Filed Date	Effective Date:	Туре	Charter#	Chater Name	Role
1/29/1973	1/29/1973	MERGE	09302090F	E. I. DU PONT DE NEMOURS AND COMPANY	SURVIVOR
6/4/1973	6/4/1973	MERGE	09302090F	E. I. DU PONT DE NEMOURS AND COMPANY	SURVIVOR
10/24/1977	10/24/1977	MERGE	09302090F	E. I. DU PONT DE NEMOURS AND COMPANY	SURVIVOR
4/19/1982	4/19/1982	MERGE	093020 9 0F	E. I. DU PONT DE NEMOURS AND COMPANY	SURVIVOR

Amendments on File (35)

Description	Date
Amendment	6/18/1923
Amendment	7/27/1925
Amendment	11/13/1926
Amendment	2/16/1929
Amendment	5/14/1934
Amendment	8/23/1937
Amendment	10/30/1939
Amendment	5/2/1940
Amendment	4/10/1942
Amendment	6/22/1946
Amendment	5/12/1947
Amendment	5/12/1947
Amendment	6/20/1949
Amendment	7/11/1955
Amendment	7/11/1955
Amendment	7/11/1955
Amendment .	12/5/1957
Amendment	7/19/1963
Amendment	9/26/1966

Amendment	5/6/1968
Amendment	5/14/1970
Merger	1/29/1973
Merger	6/4/1973
Amendment	4/29/1974
Merger	10/24/1977
Amendment	10/24/1977
Amendment	4/20/1979
Amendment	4/20/1979
Amendment	4/25/1980
Amendment	8/21/1981
Merger	4/19/1982
Stmt of Chg or Chg Prin Bus Off	2/22/1985
Stmt of Chg or Chg Prin Bus Off	4/1/1986
Stmt of Chg or Chg Prin Bus Off	2/1/1993
Stmt of Chg or Chg Prin Bus Off	1/29/2008

Print

APPENDIX C FUGITIVE EMISSIONS PROGRAM CONSOLIDATION NOTICE.

Louisiana Fugitive Emission Program Consolidation Source Notice and Agreement DuPont Pontchartrain Site, St. John the Baptist Parish (Agency Interest Numbers 1101 and 38806)

By this notice and agreement, E. I. du Pont de Nemours Co. (DuPont Pontchartrain Site) notifies the Louisiana DEQ (LDEQ) and the United States Environmental Protection Agency (EPA) of the consolidation of fugitive emission programs as indicated below, effective January 1, 2014. Semiannual reports will be submitted on August 15 and February 15, to cover the periods January 1 through June 30 and July 1through December 31, respectively. DuPont Pontchartrain Site agrees to implement the consolidated program in accordance with the Louisiana Fugitive Emission Program Consolidation Guidelines attached, and accepts federal and state enforceability of the consolidated program by EPA and LDEQ. DuPont Pontchartrain Site further acknowledges that compliance with the consolidated program in accordance with the Guidelines will serve to comply with each of the fugitive emission programs being consolidated. In addition, DuPont Pontchartrain Site acknowledges that noncompliance with the consolidated program in accordance with the Guidelines may subject DuPont Pontchartrain Site to enforcement action for one or more of the fugitive emissions programs being consolidated. Unless successfully challenged or otherwise terminated, this agreement remains in effect until revised or replaced upon request by DuPont Pontchartrain Site, LDEQ, or EPA, or until the initial Part 70 permit is issued for DuPont Pontchartrain Site, whichever is earliest. If, at any time, the agreement is not in effect with the State, then it shall not be in effect with EPA.

While several units at the DuPont Pontchartrain Site are only subject to less stringent fugitive emission rules, the entire site will comply with the HON (40 CFR 63 Subpart H) as the most stringent and guiding fugitive rule in each unit at the site per table below. On the effective date the reporting, recordkeeping, and monitoring time period (schedule) will be readjusted for the entire site to coincide with the current Diamines, ACR, and HCL Recovery Unit's schedule which runs as a calendar year from January through December therefore making the entire site applicable to just one time period. Also from the effective date, leak rates will be consolidated and calculated for the entire site per HON guidelines. The DuPont Pontchartrain Site will continue the annual valve and biennial connector monitoring frequency for the plant site until percentage leak rates dictate altering the monitoring frequency.

Unit or Plant Site	Programs being	Stream	Overall Most
	Consolidated	Applicability	Stringent Program
DuPont Pontchartrain Site	63 Sub H – HON 63 Sub FFFF 63 Sub U - P & R I LA Non-HON NSPS RCRA Sub BB LAC 33:III.2121	5% VOHAP 5% VOHAP 5% VOHAP 5% VOTAP 10% VOC 10% VOC 10% VOC	63 Subpart H - HON MACT

Signed

Walter Glenn, Plant Manager

This 16 day of 16, 20 13



DuPont Pontchartrain Site 560 Highway 44 LaPlace, LA 70068-6908

November 18, 2013

Dept. of Environmental Quality
Office of Environmental Services, Air Permits Division
P. O. Box 4313
Baton Rouge, La 70821-4313

CERTIFIED MAIL NO. 7011 3500 0001 6350 0509

Re: DuPont Pontchartrain Site Fugitive Emissions Program Consolidation Source Notice and Agreement (Al# 1101 and Al# 38806)

The DuPont Pontchartrain Site (DuPont) is requesting consolidation of all applicable site fugitive emission programs in accordance with the Louisiana Fugitive Emission Program Consolidation Guidelines and is hereby submitting the attached Source Notice and Agreement. DuPont will implement the consolidated program beginning January, 1, 2014.

While several units are only subject to less stringent fugitive emission rules, the entire site will comply with the HON (40 CFR 63 Subpart H) as the most stringent and guiding fugitive rule in each unit at the site. According to 40 CFR 63.162(g)(2) and 63.9(i) it is acceptable to adjust time periods upon mutual agreement between owner and Administrator. In addition to being regulatory acceptable, adjusting time periods is in keeping with the spirit of the consolidationagreement recordkeeping and report streamlining intention. DuPont is also requesting that the reporting, recordkeeping, and monitoring time period (schedule) be readjusted for the entire site to coincide with the current Diamines, ACR, and HCL Recovery Unit's schedule which runs as a calendar year from January through December therefore making the entire site applicable to one time period. Each unit at the site currently has a leak rate that allows for annual valve and biennial connector monitoring. From the effective date, leak rates will be consolidated and calculated for the entire site per HON guidelines. The DuPont Pontchartrain Site will continue the annual valve and biennial connector monitoring frequency for the plant site until percentage leak rates dictate altering the monitoring frequency.

The following paragraphs provide additional details relating to the fugitive programs being consolidated and how the fugitive program will be structured after the effective date.

The DuPont Pontchartrain Site currently has five units subject to various fugitive emissions regulations which have multiple overlapping applicable reporting and recordkeeping requirements. The recordkeeping requirements of these various regulations result in the same data being saved and summarized multiple times in the LDAR database. The current reporting requirements result in the submittal

of ten different reports with deadlines for these reports at different times throughout the year. These different reports often result in submitting data already reported in previous reports. In other words, multiple reports are due for different periods with some of these reports requiring and containing the same data or at least some of the same data. The Fugitive Emissions Semi-annual Report Summary Table below summarizes the program report and reporting time period information for each unit.

The following is a list of the units at the site with the most stringent applicable regulation in parenthesis: the Diamines Unit (HON), ACR Unit (MON), Chloroprene Unit (HON), the Neoprene Unit (Polymer & Resins I), and the HCL Recovery Unit (RCRA BB). The Diamines Unit which has always been owned by E. I. du Pont de Nemours Co. has already been consolidated by agreement dated October 15, 1996. The ACR, Chloroprene, HCl Recovery, and Neoprene Units were operated by DuPont Performance Elastomers, a separate entity, before 2013 and are not currently consolidated per Louisiana Fugitive Agreement. The entire facility (DuPont Pontchartrain Site) is now owned by E. I. du Pont de Nemours Co.

Fugitive Emissions Semi-annual Report Summary Table

i dgitive Emissions Semi-amidat Neport Summary Table			
Unit	Program Report	Reporting Time	
		Period before	Period beginning
		January 1, 2014	on January 1, 2014
Diamines	HON -	January through	January through
	Consolidated	June and July	June and July
	· .	through December	through December
Chloroprene	HON	April through	January through
		September and	June and July
		October through	through December
		March	
Neoprene	Polymers and	August through	
	Resins I	January and	June and July
İ	i .	February through	through December
		July	
ACR	MON	January through	January through
		June and July	June and July
		through December	through December
HCL Recovery	Chapter 21	January through	, ,
		June and July	June and July
	ļ	through December	through December

Note: Chapter 21 report contains data from Chloroprene, Neoprene, and ACR Units also.

Consolidating all the units at the DuPont Pontchartrain Site and making HON the Guiding Regulation (most stringent rule) throughout the site, will reduce the recordkeeping and reporting requirements without reducing quality of data that was submitted in the multiple reports. All of the monitoring and leak data would still be reported, it will just be reported in two semi-annual reports instead of the current ten reports that result in multiple instances of data duplication. The site will also be complying with an overall more stringent fugitive emissions program

than by complying with various less stringent programs, therefore over time reducing fugitive emissions at the site. The DuPont Pontchartrain Site will continue to submit fugitive reports for the non-HON regulations until all data for the 2013 calendar year has been reported. After all 2013 data has been reported per non-HON fugitive requirements, the DuPont Pontchartrain Site will discontinue these non-HON fugitive reports and will only submit HON semi-annual reports twice a year for the entire site.

Each unit at the site currently has a leak rate that allows for annual valve and biennial connector monitoring. The DuPont Pontchartrain Site will continue this monitoring frequency (skip period frequency) for the plant site until percentage leak rates dictate altering the monitoring frequency. Leak rates will be calculated for the entire site per HON for periods that relate to calendar year of January through December beginning on the effective date.

In summary, on January 1, 2014, the effective date of the consolidated agreement, the DuPont Pontchartrain Site will streamline the recordkeeping, reporting, and monitoring requirements and readjust the recordkeeping, reporting, and monitoring requirements' annual time period to January through December to coincide with the current Diamines, ACR, and HCL Recovery Units' annual time period while keeping the current skip period monitoring frequency intact.

At the next opportunity for renewal or modification of each of the effective permits, DuPont will include a copy of the Fugitive Emissions Program Consolidation Source Notice and Agreement in each of the effective Title V operating permit applications. Current effective Permit Numbers are 3000-V3, 206-V1, 2249-V6, and 2090-V5.

If you have any questions or need additional information you can contact me at (985) 536-5438, or at Anthony.J.Fugarino@dupont.com.

Sincerely,

Anthony Fugarino SHE Consultant

Enclosures

cc: US EPA Region 6

Compliance Assurance and Enforcement Division

Mail Number: 6-EN-A

1445 Ross Avenue, Suite 700 Dallas, Texas 75202-2733

CERTIFIED MAIL NO. 7011 3500 0001 6350 0516